

SCHOOL OF CIVIL ENGINEERING



JOINT HIGHWAY RESEARCH PROJECT

JHRP-81/9

AN INVESTIGATION OF THE
FINAL CONSTRUCTION RECORD
PROCEDURE FOR THE INDIANA
STATE HIGHWAY COMMISSION

Anne M. Bigane



PURDUE UNIVERSITY
INDIANA STATE HIGHWAY COMMISSION

Final Report

AN INVESTIGATION OF THE FINAL CONSTRUCTION RECORD
PROCEDURE FOR THE INDIANA STATE HIGHWAY COMMISSION

TO: H. L. Michael, Director
Joint Highway Research Project

July 1, 1981

FROM: Donn E. Hancher, Research Engineer
Joint Highway Research Project

Project: C-36-67K

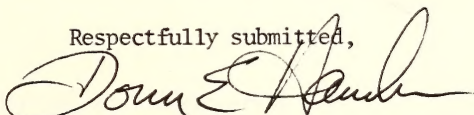
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The attached report is the Final Report on the JHRP Study "An Investigation of the Final Construction Record Procedure for the Indiana State Highway Commission." The report has been authored and the research conducted by Anne M. Bigane, under my direction.

Objectives of the research were to review the ISHC 1970 Construction Record Guide plus supporting data, review the current methods used in the six district offices to complete final construction records plus seek recommendations for improvement, and to develop a revision of the old guide which incorporates approved improvements. All three objectives were attained and are detailed in the report. The major effort was in developing the revised guide and the proposed revision is in the appendix of the report.

The findings of the Study have been reviewed and approved by the ISHC Construction Division and we will continue to work with them on implementation of the results.

Respectfully submitted,



Donn E. Hancher
Research Engineer

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AN INVESTIGATION OF THE FINAL CONSTRUCTION PHASE

PROCEEDING FOR THE INDIANA STATE HIGHWAY COMMISSION

FOR THE INDIANA STATE HIGHWAY COMMISSION

Joint Highway Research Project

Volume 1: General, Research, and

Final Highway Research Project

The attached report is the final report on the 1955 State Highway Research Project of the Indiana State Highway Commission for the 1955-1956 fiscal year.

During the year, the project was carried out in accordance with the plan of work approved by the State Highway Commission and the Federal Highway Administration.

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Final Report

AN INVESTIGATION OF THE FINAL CONSTRUCTION RECORD
PROCEDURE FOR THE INDIANA STATE HIGHWAY COMMISSION

by

Anne M. Bigane
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Project No.: C-36-67K

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Conducted by

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in cooperation with the

Indiana State Highway Commission

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The author would like to convey her appreciation to the Indiana State Highway Commission for their financial support of the research.

She would also like to express her gratitude to her major professor, Dr. Donn E. Hancher, for the assistance in selecting a research topic and its funding, and for his guidance and encouragement throughout both the research and the author's Master's degree coursework.

Finally, the author would like to thank all of the Indiana State Highway Commission Personnel who provided her with an ample amount of data and suggestions about the research topic.

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ABSTRACT

Bigane, Anne. Masters, Purdue University, May 1980. An Investigation of the Final Construction Record Procedure for the Indiana State Highway Commission

Upon completion of a project for the Indiana State Highway Commission, all construction pay quantities must be documented and checked. This material and other pertinent information constitute the Final Construction Record. The information in this record is used by several departments including Accounting, Design and Development. Currently the Final Construction Record is prepared using the Indiana State Highway Commission 1970 Construction Record Guide for Road, Bridge, Maintenance and Traffic Contracts. Included in this guide are examples of all of the necessary forms and procedures needed to verify the final construction quantities.

The Final Construction Record is prepared by the Project Engineer or Supervisor and then submitted to the District Review Officer for review. The reviewed record is then forwarded to the Central Office in Indianapolis for final approval. The Final Construction Record is greatly relied upon and essential to the acceptance of the final pay quantities for an ISHC construction

project. Because of the importance of the Record and its varied uses, it is essential that the material in it be presented in the most accurate and efficient manner. The primary objective of this study was to evaluate and update the current Construction Record Guide.

In order to attain the objective of the investigation, several goals were identified. The first goal was to review the ISHC 1970 Construction Record Guide for Road, Bridge, Maintenance and Traffic Contracts thoroughly. The second goal was to review the current methods of completing the Final Construction Record in each of the districts. This was accomplished through interviews with the staff of the ISHC Construction Division and with the District Review Officers for each of the six districts. The information obtained through these interviews was compiled and discussed with the ISHC Construction Division Personnel. The final recommendations made by the researcher are contained in this report.

The final recommendations were compiled in the form of the Construction Record Guide, 1981 Revision attached as an appendix of this report.

CHAPTER 1

INTRODUCTION

Every year the Indiana State Highway Commission contracts for the construction of many different types of projects. These projects range from the installation of new traffic signals to the expansion of the network of roads and highways that criss-cross the state. Upon completion of every project, regardless of size, a Final Construction Record is prepared by the Project Engineer/Supervisor.

This Record has several important functions. First, the documentation of construction quantities and work done is used to determine the final pay quantities and the completed cost of the project. Secondly, the contractor will not receive final payment until the Final Construction Record is completed and reviewed. Finally, the design and development departments use the cost information provided by the Record as a reference in the preparation of future contracts and budgets.

If the Record is not completed and reviewed within 180 days from the time of acceptance of the project, the ISHC must pay interest at a rate set by the State

Legislature on the unpaid balance, until it is paid.

1.1 Justification

Every Project Engineer/Supervisor receives a copy of the ISHC 1970 Construction Record Guide to be used as a reference in the preparation of the Final Construction Record for a project. This guide is set up in the form of a sample Final Construction Record, with examples of the various forms and how they should be completed.

The major proportion of the types of projects completed by the ISHC has drastically changed in the past decade. Through the early 1970's, the ISHC was still appropriating the greatest part of its budget for the new construction of the Interstate and other State Highways in Indiana. This network has been virtually completed and now the focus of the construction done by the ISHC has shifted to maintenance and repair of this network. This shift in the type of work has brought with it a different set of construction items; the Construction Record Guide should be revised to reflect this changing focus. It is hoped that the conclusions and recommendations made in this study will help the ISHC to create a more useful tool for its field employees.

1.2 Goals of the Study

During early interviews with the ISHC Construction Division Personnel several goals were identified as essential to the attainment of the objectives of this study.

The first goal was to thoroughly review the existing Construction Record Guide. It was important to have a complete understanding of the current procedure before typing to recommend any changes.

The second goal was to develop a set of recommendations for improvements in the 1970 Construction Record Guide, and the procedures associated with it.

The third goal was to incorporate these recommendations with the existing material and develop a draft revision of the Construction Record Guide.

1.3 Methodology

The Final Construction Record is completed by the Project Engineer/Supervisor. After the Record has been compiled, it is sent to the District Office to be reviewed by the District Review Officer. Since the District Review Officers have the greatest exposure to a variety of projects, it was decided that interviews with these six individuals would provide the best feedback on the Construction Record Guide as it exists today. They review many types of projects every year. It is also their

responsibility that the Final Construction Record be prepared correctly. Any shortcomings in the existing Guide would be most apparent to those who must work with it on a day-to-day basis.

The following questions were used in each interview:

1. What do you think about the Construction Record Guide?
 - a) Unnecessary sections?
 - b) Repetitions?
 - c) Needed sections?
 - d) Unnecessary forms?
2. Can you suggest any changes that might improve the Guide? Help to streamline the paperwork?
3. Do you feel that the Guide is an adequate tool in the preparation of a Final Construction Record?
4. Do you feel periodic workshops on the preparation of the Final Construction Record would be beneficial?
5. Can you suggest any changes in the current quantity pay units on any items? Is more time spent checking the quantities than installing the item? Would a different unit be easier to measure and control?

In all of the interviews, the researcher stressed the fact that the Review Officer's opinions and recommendations would be kept in strict confidence. These interviews

provided a great deal of valuable information and suggestions for the improvement of the Construction Record Guide. The results of these interviews will be presented in Chapter Two of this report.

Finally, after all of the suggestions from the interviews were compiled, the researcher prepared a revised draft of the Construction Record Guide. Throughout the preparation of this revision, the researcher kept in constant contact and received much input from the Central Office staff of the Construction Division. A complete copy of the Draft Revision accompanies this report as a supplementary appendix.

CHAPTER 2

RESULTS OF THE INTERVIEWS

The researcher traveled to each of the six District Offices of the Indiana State Highway Commission. The District Review Officer is responsible for reviewing the Final Construction Record submitted by the Project Engineer/Supervisor. This review consists of checking all of the computations contained in the Record and preparation of the required material certifications. The reviewed Record is then forwarded to the Central Office of the Construction Division in Indianapolis. The Central Office then issues the final payment to the Contractor. The District Review Officers were interviewed because it was felt that they had the greatest exposure to the Construction Record Guide and its shortcomings would be most apparent to them. The questions listed in Section 1.3 of this report were asked of each of the District Review Officers.

The overall format of the Construction Record Guide was approved by all of the District Review Officers. They felt it could serve as a valuable tool to the Project Engineer/Supervisor if it was revised and updated. Every PE/PS should receive a copy of the Guide at the beginning

of a project. This was especially stressed in the case of city or county project engineers, who often have much trouble completing the Final Construction Record. Several Review Officers stated this was due in part to an unfamiliarity with ISHC forms, and often was due to the high turnover rate of municipal employees during the project. The researcher recommends that the ISHC request that the turnover of city and county staff on state projects be kept at a minimum. Periodic workshops incorporating project engineers from all sources, on the preparation of the Final Construction Record would also help alleviate this problem.

The 1970 Construction Record Guide contains a great deal of spelling and mathematical inaccuracies which make it difficult to use. Inexperienced project supervisors would have trouble following examples that contained these types of errors. Another common complaint was the fact that the Guide contained several forms which have been revised since the original publication, but were never replaced in the Guide. The revised forms contained substantial differences in several cases. These errors were corrected in the revised Guide.

The District Review Officers also commented on the fact that many Project Engineers were copying sketches from the field books onto ISHC forms. Noting that the field book is already part of the Final Construction

Record, this repetition is unnecessary. Every time a sketch is transferred from a set or original notes, the chances for errors increase substantially. These copying errors slow down the reviewing process. Original notes may be kept in a bound field book or on an approved ISHC form; reference in the Final Construction Record need then only be made to the original location.

Several Construction Record forms were deemed unnecessary by the District personnel. They were the IC 627A, IC 615A, IC 611A and IC 611B. The IC 627A and 615A are modifications of the 627 and 615. The information contained on these forms can be found in alternate places in the Final Construction Record. The researcher concurs and recommends the elimination of these forms.

Currently there is a fairly complicated procedure for rounding off calculations and measurements to the proper number of significant figures listed in the front of the Construction Record Guide. All of those interviewed felt that a less complex system based on the dollar value of the associated unit price would be more appropriate. Items with unit prices under \$10.00 are rounded to the nearest whole unit. Items between \$10.00-\$100.00 are carried to the nearest tenth of a unit. Any item over \$100.00 is carried to the nearest hundredth of a unit. The researcher agreed that a system based on unit cost would be easier to understand and use.

Several other recommendations were made by the District personnel. The IC 642 is a form which summarizes all of the financial information about the project. Multiple copies of this form are often required. They recommend that a listing of when more than one copy is necessary be included in the Guide. Additionally, several review officers requested that examples of Bridge Deck Repair and Traffic items and their required documentation be included also. These types of items are used with increasing frequency as the focus of highway construction by the ISHC has shifted within the last few years. The researcher also concurs with these recommended revisions.

As to the issue of quantity pay units, the District Review Officers felt that the units currently being used were adequate. They could not suggest any changes or modifications in this area.

CHAPTER 3

CHANGES IN THE 1970 CONSTRUCTION RECORD GUIDE

After speaking with the District Review Officers and other ISHC Construction Division personnel, the following changes were compiled in the Construction Record Guide, 1981 Revision.

All numerical, transposition and misspelling errors were corrected. In the General Instructions provided before the Sample Record, the description of "original notes" was expanded upon to help eliminate the recopying of sketches and figures for the Final Record. All documentation requires signatures and dates of the appropriate personnel.

The present system of determining the proper number of significant figures is more complicated than it needs to be. The system in the revision is based on dollar value of the unit price of every item.

Since 1970 the Division of Construction has taken over the administration of all construction contracts. These include those formerly handled by the Divisions of Maintenance and Traffic. All reference to these Divisions were eliminated from the Guide.

The ISHC form M-231 for Bridge Widening and Culvert Extension and all references to it were removed from the Guide since this form is not used in the Final Construction Record.

The description of transmittal of the final reviewed Record to the Central Office was expanded upon to include a list of all pertinent material.

The form I.C. 699 has been revised since the original publication. This revision contains several significant changes. The explanation of the form was expanded to include these differences. Among these changes is the inclusion of the number of as-built plans, field books and cross-sections in the remarks section of the form.

For all excavation quantities, anytime the plan quantities will be used, the contractor's signature is suggested to confirm that effect.

B Borrow for Structure Backfill should include references to or a copy of detailed computations, especially when the quantity differs from the plans.

For Pavement Removal items computations and original notes should contain the names of all pertinent highway employees.

The amount of pure Calcium Chloride must be deducted from the quantities of compacted aggregate for all Aggregates and Bituminous Mixes. All pure Calcium Chloride and pug mill reports must then be included in the Final Construction Record.

The Construction Record forms IC 627A, IC 615A, IC 611A and IC 611B were eliminated. The IC 611A still remains in the revised guide as an example only, since the information contained on it is still needed. This information will be found in the field book from this time on.

The explanation for pipe structure items was expanded to include reference to the IC 612B form, which summarizes all structure pay quantities. These include catch basins, manholes, end sections, class "A" concrete, steel, etc.

Original notes and sketches of sub-surface drain runs are to be taken daily and totaled in the field book. This information is placed in summary form only in the Final Construction Record. The copying of original notes is to be eliminated as much as possible.

The pay quantities for Riprap were changed to include a choice between the ton or square yard.

Field measurements for Paved Side Ditches must include not only the lineal feet of ditch but also the number of lugs, toewalls and the total pay length.

The original notes for all Signs and Barricades shall be maintained current throughout the project. The movement and/or reusal of signs must be noted and done so in accordance with Article 801.14 of the 1980 Specifications. Original notes shall include a sketch of the location of the signs and barricades.

The explanation of the seeding items was corrected to include the proper reference to current forms and specifications. It was also noted that the Record must include a statement that the agricultural lime and fertilizer used under sodded areas has been deducted, since they are included in the sodding costs.

The explanation sheets for Steel and Timber Piles were combined. The Order for Piling, Form IC 226 shall be included in the Record also.

The excessive overrun and underrun item explanation was updated in accordance with current specifications. Any change in unit price is negotiable and based only on that quantity of the item which exceeds a percentage set in the specifications. A copy of all worksheets and the Central Office cover letter shall be included in the Record for every change in the original contract.

The Engineer may permit the usage of "failed immediate usage material" which has already been incorporated into the work prior to the testing results which show that it has failed. Any deductions to be applied will be determined by the Failed Material Committee.

A reference to Article 715.12 of the 1980 Specifications was added to the Explanation of Additional Excavation Items.

A chart of when multiple copies of the IC 642 (Comparison of Estimates) are required was added. Extra Work Agreements items shall include a description in addition to the approval date on the IC 642.

The IC 654 (Record of Construction) has been revised and eliminates the former IC 654 and the M-269. The explanation sheet was corrected to reflect this change. A major item was also defined to be any item in excess of 5% of the total contract.

The Explanation sheet for the IC 632 (Liquidated Damages) was rewritten to more completely explain the revised form and the proper procedures for completing these forms.

Additionally, several new sections were added to the Guide. These were the IC 728 (Controlling Dates in Final Estimate Preparation for Computing Interest Due the Contractor), the documentation of Alternate Bid Items, and examples of Bridge Deck Repair and Traffic items.

CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

The major goal for this study was to review the ISHC 1970 Construction Record Guide for Road, Bridge, Maintenance and Traffic Contracts and draft a revised version of the Guide. The preceding chapters of this report have listed many of the recommendations made by the District Review Officers as to areas which could be improved. These improvements will help the Project Engineer/Supervisor in the preparation of the Final Construction Record and the District Review Officer in the review of the Record. Listed below are previously mentioned recommendations by ISHC personnel and some additional recommendations made by the researcher:

1. Make the corrections necessary to eliminate all spelling and mathematical errors contained in the existing Guide.
2. Update all forms in the Guide so that the most current version of every form is available.
3. Require the Project Engineer/Supervisor to reference his sketches whenever possible. Avoid recopying these sketches onto ISHC forms.

4. Eliminate the Construction Record forms IC 627A, IC 615A, IC 611A and the IC 611B since the information on these forms is contained elsewhere in the Record.
5. Eliminate the complicated method of rounding to significant figures, and use a method based on the unit price of the item. All calculations should be made in pay quantity units.
6. List a general form of when more than one copy of the IC 642 is required on a project.
7. Add a Bridge Deck Repair and Traffic Section.
8. Add a section to the Guide which shows an example of the documentation necessary for alternate bid items.
9. Include a copy of the IC 728, which contains a list of the controlling dates in Final Estimate Preparation for computing interest due the contractor.

All of the recommendations listed above were incorporated into a revised version of the Construction Record Guide contained as a supplementary appendix to this report. In developing this revision a completely new original was made to help facilitate the printing of a new Guide by the Construction Division of the ISHC.

LIST OF REFERENCES

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Indiana State Highway Commission. 1970 Construction Record Guide for Road, Bridge, Maintenance and Traffic Contracts.

Indiana State Highway Commission. General Instructions to Field Employees - Division of Construction, 1980.

Indiana State Highway Commission. Standard Specifications, 1979.

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CONSTRUCTION RECORD GUIDE

General Information

The purpose of a construction record is to set out, clearly and completely, computations to show the final amount of money to be paid to the contractor. The record will aid accounting by breaking down costs by projects, and by showing any costs which will be paid for by state funds only on contracts with federal participation. Incidental information supplied by the record will be used in preparing periodic reports and in planning future work.

Computations for each pay item in the contract should start from original notes, which show measurements for computing the quantity of units to be paid for. Original notes may be taken in a bound field book or on an appropriate construction record form. Some examples of original notes are: crosssections in a field book for earthwork, sketches for removal items, weigh tickets for items paid by weight, etc. All original notes should be dated and identify those individuals who made the measurements and notes.

Starting from these original notes, the computations for each item should be so that they can readily be followed by a checker. To aid in following the computations; the final record should be completely cross indexed so that any quantity which is carried from one page to another can be easily identified and checked.

All pages in the record should be signed or initialed by the person who prepared them. If calculations are required, each calculation will be checked by someone other than the one making the original calculation. All checks will be initialed and dated, and a system of check marks will be used to show the extent of the check.

Erasures or overwriting are not acceptable in original notes. Errors should be corrected by neatly crossing out the erroneous data with a double light line and entering the correct data in the most logical place. All original notes should be included as a part of the record. Bound field books, by reference, may be considered a part of the record when they are submitted with it.

All pages in the construction record should be signed and dated by the employee who prepared, computed and checked them. This includes all original notes and field measurements in the Construction Record.



In this guide the use of the symbol shown means merely the omission of entries to show a complete continuity. It prevents the use of repetitive details in the guide, showing instead only guiding samples of the material required in a complete record.

Pages of the record should be numbered, using the item number as first page of a hyphenated number. This system will permit page numbering and cross referencing to be done as work on the record progresses.

The last numbered item which appeared in the proposal should be followed by pay items in the following order: items whose prices are established Specifications or Special Provisions, then items whose prices are established by Extra Work Agreements in the order of approval of the agreements.

Following these the record contains as numbered pages:

- 1.C. 626's in order of approval.
- 1.C. 642's.
- M 39
- 1.C. 654's.
- 1.C. 635.
- 1.C. 632
- 1.C. 149's.

Explanation of Overruns and Underruns

For each item of the contract an explanation of underruns and overruns from the original contract must be made on the 1.C. 627 Form, as the case may be. Excavation items will not normally need to be broken down by balances, but location of major overruns or underruns must be identified. If there is not enough available space on the 1.C. 627 for explanation of a particular item, then the explanation should be continued on an 1.C. 615 following the 1.C. 627.

An approved Change in Plans, Form 1.C. 626, would be an acceptable explanation on the 1.C. 627, and they should be cross-referenced. If an item involved more than one 1.C. 626, the 1.C. 626's should be tabulated to show the total amount that is covered. Any remainder not covered by 1.C. 626 would require adequate explanation.

When making the explanation for an item, do not pick out one unit of an item that varies from the estimate by an amount approximately equal to the overrun or underrun for the whole item and explain the one variation when there are other sizable variations in the item. If there are several overruns and underruns, or differences that compensate, all of which are for the same reason, they should be grouped. This is particularly true of structures. On extra work agreements, explain the difference between the amount on the agreement and the amount placed.

Accuracy of Calculations

The degree of accuracy tabulation is furnished to show the required accuracy for measurements and calculation.

In rounding off, all quantities less than an exact split will be reduced to the next lower unit. And those more than exact split will be increased to the next larger unit. Exact splits will be rounded off to the closest even unit.

The degree of accuracy will be based on the dollar value of the bid item as shown below. All calculations and measurements will be carried to the next smallest unit until the final round off.

<u>Bid Amount</u>	<u>Accuracy</u>
\$0 - 9.99	1 Unit
\$10.00 - 99.99	0.1 Unit
Over \$100	0.01 Unit

PAINTING CONTRACTS

The original notes for bridge painting contracts should be entered in a field book. The record of the paint used on each structure should be shown along with a record of the measured thickness of the paint. The paint quantity by structures, should be carried directly to an 1.C 627 Sheet.

Materials to be Submitted with the Construction Record

Final Estimate, Form DAC-25: A final estimate is to be prepared by the District Office and submitted with the Construction Record. The estimate is to be made on Form DAC-25 in a manner similar to Progress Estimates. In the page headings the words "and Final" should be added after the estimate number. The amount of Liquidated Damages, if any, should be entered in the proper location in the summary of the estimate. A separate final estimate will be prepared for each project in the contract. This breakdown is the same as that for the Progress Estimate. The Controllers Office furnishes prepared forms for each breakdown of the estimates.

If Forms DAC-25 have not been furnished for any contract the Final Estimate will be made on the same forms that Progress Estimates are prepared on.

Material Record, Form IT 611: The Project File copies of the Material Records should be transmitted to the Division of Construction for all Contracts along with the Construction Record.

Transmittal to Central Office

The complete construction record with its supporting data and other material is to be transmitted to the Central Office after all of the Record is complete and checked. A transmittal letter should list the items transmitted, so that they can be checked by the receiver. The list should state the number of Construction Record Books and list such items as the field copy of daily reports, field notebooks, original survey book, correspondence file, weight tickets, and cross-sections.

The carrier of the Construction Record for a Contract should be instructed to deliver it to the Engineer of Office Administration, Room 1313, State Office Building and get the District copy of the transmittal letter receipted.

For all "M" contracts the complete construction record with its supporting data which will include weight tickets, field books, BRC books, IT 611's and crossections, is to be submitted to the central office after the Record is complete and checked. A transmittal letter should list the items transmitted, so they can be checked by the receiver and a receipt signed by the receiver. The district files are not to be sent with the final Construction Record to the Central Office. The project files must be sent with the Construction Record.

Check Lists for Construction Record

This Check List is to be prepared and placed in the front of the Construction Record at the District Office. The column headed DO is to be used by the District Office. The column headed "CO" is to be used for Central Office checking.

Appropriate items are to be completed by using the code shown at the bottom of each page. The Form is to be signed by the District Review Officer and all items which are completely checked under his supervision should be listed at the bottom of the last page. One or more items should be checked under his supervision on all contracts.

Forms should not be used which are older than the one revised November, 1978.

Some of the boxes in the form have "X's" in them. They mean that the item does not apply to the checking done in that column.

Include the number of field books, "as built" plans, and crossections to be included with the record under item 33. List under item 18, ic , 699, the names of all property owners from whom property releases are required.

Form I. C. 699
Rev. 11-78

Page 1 of 3

2M 2-79

CHECK LIST FOR CONSTRUCTION RECORD
(To Be Inserted in Front of Construction Record)

Type of Contract or Work CONC. & BITUMINOUS
PAVING, BRIDGE, & TRAFFIC

Contract No. I-0000

Location FROM FIRST STREET IN
MIAMI NORTH 1 MILE.

Project No. I-100-1(10)

Contractor GENERAL CONSTRUCTION CO.

Structure No. _____

USE CODE AT BOTTOM OF PAGE

1. Is form I. C. 608 complete including checkers names?
2. Has an index been included?
3. Does cross-section plotting and area calculations have at least 25 percent check by District?
4. Have cut, excess cut, borrow pits and excess fill computations had a 100% check in the District Office?
5. Has fertilizer and lime used under sod been deducted or accounted for on a statement signed by PE/PS?
6. Have I. C. 627's been checked for:
 - a) Breakdown by projects, structures, funding, etc.?
 - b) Accuracy of plan and placed quantities, also signed explanation?
7. Change in Plans and Extra Work Agreements:
 - a) Have Forms I. C. 115 and/or I. C. 626 been submitted on all significant overruns and underruns?
 - b) Have Forms I. C. 115 and/or I. C. 626 been sent to the Federal Aid Section on "S" Projects?
8. Have I. C. 642's been checked for:
 - a) Accuracy of all quantities, unit prices and extensions?
 - b) Breakdown by Proj., Str., Funding, etc. as split in proposal?
 - c) Non-Part. work shown as a "Z" item? (Federal Aid Contracts)

D. O.	C. O.
Y	
Y	
Y	X
Y	X
Y	
Y	
Y	
X	
Y	
Y	
Y	

Y = Yes
N = No
X = DNA

Form I. C. 699
Rev. 11-78

Page 2 of 3

9. Has the Final Estimate been checked for:
 - a) Date of first and last work?
 - b) Final quantities in agreement with I. C. 642's?
 - c) Non-Participating work shown as "Z" item? (Federal Aid Contracts)
 - d) Signatures?
10. Are Forms I. C. 225, Pile Driving Record & I. C. 226, Order for Piling included when needed?
11. If materials ordered by the PE/PS were not used on the contract and were purchased from the contractor, has Form I. C. 625A been included with the new item?
12. Does the Final Construction Record include a separate Form I. C. 654 for each Project and Structure?
13. a) Has resovelment of overrun of contract work days, completion date or open to traffic date been made?
b) Has Form M-39, with liquidated damages or damages sustained stated thereon, been signed by the contractor?
14. Has Form I. C. 632 been properly prepared and signed?
15. Are copies of Form I. C. 639 and letter of acceptance in the Construction Record?
16. Has Form I. C. 636A (Traffic Only) been submitted for each traffic installation to the District and Central Office Traffic Departments?
17. Has Clearance Information, Form M-232A been submitted?
18. Are Property Releases included and signed?
19. Has a check of all Weigh Tickets for Project and/or Contract No., accuracy, two signatures and percent of moisture been made?
20. Have As-Built plans for Bridges, Signs and Signals been forwarded to Central Office?
21. Have Shop Tracings been received?
22. Have Prestressed I-Beam reports been received?

D. O.	C. O.
Y	
Y	
Y	
Y	
Y	
Y	
Y	
Y	
Y	
N	
Y	
N	
Y	X
Y	
X	
X	

Y = Yes
N = No
X = DNA

Form I. C. 699
Rev. 11-78

Page 3 of 3

23. Have pavement thickness reports been received?
a) Have deductions or adjustments been made for concrete thickness and/or placement of reinforcing steel where required?
24. Has a clearance letter releasing the contractor from all indebtedness been received from the railroad?
25. Has the control book been checked for any unresolved problems such as failed materials, claims, damage suits, etc.?
26. a) Have Original Survey books been returned to Central Office Records Department?
b) Have original cross sections been sent to Central Office when applicable?
27. Have Bench Mark Tablets been set?
a) Has Form I. C. 126, Final Description and Elevation of Bench Marks been distributed?
28. Has Form CR-2 been sent to Central Office?
29. Has a material certificate been issued with all exceptions listed?
30. Does the project file contain payrolls on all Federal Aid Projects?
31. Has a Form P. R. 47 been submitted for contracts over \$500,000?
a) Has a Form P. R. 47 been approved by FHWA?
32. Has Form I. C. 630, Interstate Certificate been signed?
33. Remarks: _____

D. O.	C. O.
Y	
Y	
X	
X	
Y	
Y	
Y	X
Y	
Y	
Y	
X	
X	

This Construction Record has received a complete review under my supervision and a detailed check has been made of items numbered: 4, 5, 7-9, 11-27,

29-36, 38, 39, 42, 45-49, 51-55, 64-68.

Harry Mann

District Review Officer Date 31 Dec 69

Central Office Review By: _____ Date _____

Y = Yes
N = No
X = DNA

Form I. C. 699
Rev. 11-78

Page 3 of 3

23. Have pavement thickness reports been received?
a) Have deductions or adjustments been made for concrete thickness and/or placement of reinforcing steel where required?
24. Has a clearance letter releasing the contractor from all indebtedness been received from the railroad?
25. Has the control book been checked for any unresolved problems such as failed materials, claims, damage suits, etc.?
26. a) Have Original Survey books been returned to Central Office Records Department?
b) Have original cross sections been sent to Central Office when applicable?
27. Have Bench Mark Tablets been set?
a) Has Form I. C. 126, Final Description and Elevation of Bench Marks been distributed?
28. Has Form CR-2 been sent to Central Office?
29. Has a material certificate been issued with all exceptions listed?
30. Does the project file contain payrolls on all Federal Aid Projects?
31. Has a Form P. R. 47 been submitted for contracts over \$500,000?
a) Has a Form P. R. 47 been approved by FHWA?
32. Has Form I. C. 630, Interstate Certificate been signed?
33. Remarks: _____

D. O.	C. O.
Y	
Y	
X	
X	
Y	
Y	
Y	
Y	X
Y	
Y	
Y	
X	
X	

This Construction Record has received a complete review under my supervision and a detailed check has been made of items numbered: 4-5, 7-9, 11-27,

29-35, 38, 39, 42, 45-49, 51-55, 64-68,

Harry Mann District Review Officer Date 31 Dec 69

Central Office Review By: _____ Date _____

Y = Yes
N = No
X = DNA

FORM I C 600
REV. 11-66

State Form 35487

SM 2-79

INDIANA STATE HIGHWAY COMMISSION
DIVISION OF CONSTRUCTION

CONSTRUCTION RECORD TO ACCOMPANY FINAL ESTIMATE ON

Project No. I-100-1(1)0 Structure No. 100-1-1111 Contract No. I-0000STATE ROAD No. 100 N. Main St., Miami 1st. St. N. Miami Indian
(Location - Control Points) (County)WORK STARTED 20 January, 1969PAVEMENT COMPLETED 30 September, 1969LAST WORK PERFORMED 31 October, 1969CONTRACTOR General Construction Co., Hoosierville, IndianaDISTRICT ENGINEER Paul JonesPROJECT ENGINEER, from 16 Dec. 1968 to 31 Dec. 1969 John Doe
(Name)PROJECT ENGINEER, from _____ 19____ to _____ 19____
(Name)ASST. PROJ. ENGR., from 2 Jan. 1969 to 15 Dec. 1969 Richard Doe
(Name)ASST. PROJ. ENGR., from 15 Jan. 1969 to 15 June 1969 I. W. Brigham
(Name)ASST. PROJ. ENGR., from _____ 19____ to _____ 19____
(Name)ASST. PROJ. ENGR., from _____ 19____ to _____ 19____
(Name)INSPECTOR, from 16 Jan. 1969 to 30 Nov. 1969 Bruce Doe
(Name)INSPECTOR, from 15 May 1969 to 31 Oct. 1969 Frank Perkins
(Name)INSPECTOR, from 1 June 1969 to 30 Sept. 1969 T. R. Weaver
(Name)INSPECTOR, from 15 June 1969 to 15 Sept. 1969 J. T. Scholer
(Name)INSPECTOR, from 15 June 1969 to 15 Sept. 1969 H.O. Booker
(Name)INSPECTOR, from _____ 19____ to _____ 19____
(Name)INSPECTOR, from _____ 19____ to _____ 19____
(Name)INSPECTOR, from _____ 19____ to _____ 19____
(Name)INSPECTOR, from _____ 19____ to _____ 19____
(Name)INSPECTOR, District Check from _____ 19____ to _____ 19____
(Name)INSPECTOR, from _____ 19____ to _____ 19____ Harry Mann
(Name)INSPECTOR, from _____ 19____ to _____ 19____
(Name)INSPECTOR, from _____ 19____ to _____ 19____
(Name)

CONSTRUCTION RECORD

PREPARED BY John Doe REVIEWED BY Harry Mann

COMMON OR UNCLASSIFIED EXCAVATION

The Special Provisions will specify either "Contract Quantity Payment" or "Measured Quantities" for these and other grading items.

Contract Quantity Payment: Where "Contract Quantity" or "Plan Quantity" payment is specified, it will be necessary to take final cross sections of the roadway only as they are required to establish the reasonable accuracy of the planned quantities; and as they are required to make excavations deductions from borrow material.

In order to establish the reasonable accuracy of the plan quantities, cross sections should be taken every 500 feet. These should be plotted and the cut areas computed. If anyone of these areas varies from the planned area as much as 10 percent, an investigation should be made to determine if the planned quantity for the balance should be revised or if measured quantities should be substituted for plan quantities. If the average deviation of the measured areas from the planned areas for the entire contract exceeds two percent a similar investigation should be made.

To further check the accuracy of the plan quantity of excavation at least one balance should be completely computed from the cut areas shown on the cross sections. If the cross sections were plotted and the areas and volumes printed on the cross section sheet by a computer, the check of a balance may be done by making an addition of all of the parts which constitute the common or unclassified excavation in the balance.

Pages 1A-1 and 1A-2 show sample computations to justify "Contract Quantity Payment." The Record should contain a statement signed by the Project Engineer and Project Supervisory similar to that shown on page 1A-1 for any part of the job on which plan quantities are to be used. The contractors representative should sign the statement at this time also.

In balances where it is found that contract quantity payments are justified and where no borrow was used, no excavation deduction will be needed.

In balances where borrow is used, the cross sections which have been taken at 500 foot intervals should be examined to determine if fill deductions should be made. If it is found that fill deduction should be made, it will be necessary to take additional cross sections to measure the deductible material. Borrow balances should also be carefully inspected visually to determine if there are other areas which should be sectioned to measure.

Measured Quantities: Where "Measured Quantities" are specified or found necessary by the check of plan quantities described previously the excavated quantities in each balance are to be computed on Form IC-401. Any quantity measured separately from the main line should be added to the proper balance total. If "excess cut" or "waste" deductions are described below, are applicable to the roadway excavation, they should be made from the balance totals.

Computer computation of roadway excavation is now available. To obtain this service the final cross sections must be coded by District personnel. It will also be necessary for the original cross sections to be coded by District personnel unless the original cross sections were plotted for design by a computer. In the latter case the original cross sections will have already been coded.

In the event that computer computation is requested, computer plotting should also be requested. This is to make the final plotted sections available for examination and for making any necessary excavation deductions. Within limitations, the District can select the scale to which the plotting is made. No additional coding is necessary to obtain the computer plotting.

DEDUCTIONS

The following definitions are made to aid in understanding this discussion:

Authorized Cuts: All cut between slopes staked by the Engineer; also any authorized cuts beyond these slopes. These flattened slopes include those authorized at cut to fill transitions and others that may be authorized to help control erosion.

Excess Cut: All cuts performed on the right-of-way beyond the limits of authorized cuts.

Fill Waste: All fills placed in embankments outside of staked limits plus tolerance limits as defined in the specifications.

This applies to all excavated material which is suitable for fill but wasted either on or off of the right-of-way.

Deductions: That part of "fill waste" or "excess cut" which need not have been excavated in order to complete the work as staked or otherwise specifically authorized.

Computing Deductions: The location of slope stakes, as shown on the grade sheets, should be plotted on the cross sections. If fill extends beyond the slope stakes, the specified tolerance limits should also be plotted. Any authorized cut or fill beyond these limits should be explained and initialed on the cross section.

In waste balances, deductions will ordinarily be made from cut. In borrow balances they will ordinarily be made in fill. In balances with neither waste or borrow, deductions will be made from the lesser of "excess cut" or "fill waste." If the lesser cannot be determined by inspection of the cross sections, it will be necessary to compute both in order to determine which is the lesser quantity.

Fill deductions are to be made from the most expensive material used to the exclusion of the material. For example, if common or unclassified excavation was bid higher than borrow, fill deductions would be made from common or unclassified excavation up to the amount of "excess cut" which was made in the balance. Normally fill deductions will be from borrow.

Cut deductions will be from the class of excavation represented by the "excess cut."

On jobs where no material suitable for fills is wasted outside of the right-of-way limits, deductions may be determined by treating the entire contract as one balance. Obviously, if borrow is required "fill waste" should be deducted.

Where it is necessary to compute "excess cut", "fill waste", or both the computations should be made on Form I.C. 401 with totals for each balance. No shrinkage factor is applied to deductions.

FORM I. C. - 827

Rev. 2-62

IOM 8-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORDPAGE No. 1

I PROJ. NO. 100 SECTION 1110 STR. NO. _____ CONTRACT NO. I-0000
 ITEM COMMON EXCAVATION No. 1
 OVERRUNS 54 AT 6.70 37.80 UNDERRUNS _____ AT _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
0+00 - 9+90	98,766	98,966	200			1-1
9+90 - 26+40	766	567		199		1-1
26+40 - 40+00	900	987	87			1-1
40+00 - 52+80	1000	913		87		1-1
	101,432	101,433	287	286	TOTAL 1-100-1110	
	625	678	53		FR # 1	1-2
	102,057	102,111	340	286	TOTAL CONTRACT	
BALANCE NO. 1 CUT OVERRUN BY THE APPROXIMATE AMOUNT OF VERY WEAK MATERIAL THAT WAS UNDER- CUT BETWEEN STATIONS 3+00 - 4+50.						
BALANCE NO. 2 UNDERCUT DUE TO AN ERROR FOUND IN COMPUTED AREA AT STA. 20+00						
John Doe						

COMPUTED BY JD

CHECKED RB

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

BM 3-79

I PROJ NO. 100-1(1) 0 STR. NO.

CONTRACT NO. I-0000

ITEM COMMON EXCAVATION

No. _____

[illegible]

COMPUTED BY JD

CHECKED *LD.*



INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

5M 3-79

I PROJ. NO. 100-1(1)0 STR. NO.

CONTRACT NO. I-0000

ITEM COMMON EXCAVATION

- No. _____

[illegible]

COMPUTED BY JD

CHECKED *LD*

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

6M 3-79

I PROJ. NO. 100-1110 STR. NO. _____

CONTRACT NO. I-0000

ITEM EXCAVATION - DEDUCTIONS No.

[illegible]

COMPUTED BY JD

CHECKED *RA*

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

I PROJ. NO. 100 ST. NO. 1(1) 0 CONTRACT NO. I-0000
 ITEM COMMON EXCAVATION NO. 1

COMPARISON OF PLANNED & FINAL
CUT AREAS

STATION	PLANNED AREA	FINAL AREA	DEVIATION %	REMARKS
2+00	214	216	+1	
7+	1000	1006	+1	
12+	20	19	-5	
17+	20	21	+5	
22+	20	20	0	
27+	40	38	-5	
32+	12	13	+8	
37+	30	28	-7	
42+	15	16	+7	
47+	25	24	-4	
52+	17	19	+12	*
ALGEBRAIC TOTAL			+13	
AVERAGE			+1	

* ERROR FOUND IN ORIGINAL AREAS. AREAS OF
ADJACENT SECTIONS WERE CORRECT.

THE COMPUTATIONS ON THIS PAGE AND ON PAGE
1A-2 INDICATE THAT THE PLANNED QUANTITIES ARE
ACCURATE ENOUGH TO JUSTIFY "CONTRACT QUANTITY
PAYMENT."

J.M.H. Doe, PROJECT

ENGINEER

COMPUTED BY JD

CHECKED RD

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

I PROJ NO. 100 STR. NO. 1(1)0

CONTRACT NO. I-0000

ITEM. _____ No. _____

[illegible]

COMPUTED BY JD

CHECKED *RD*

BORROW

Compute the net volume removed from each pit on Forms 1.C 401. Use form 1.C. 615 to distribute each pit total to the balances.

The location of each borrow pit and the name of the owner should be shown in the field book, on the cross section sheets and on Form 1.C. 401. The field book should also contain a sketch of the pit's base line layout and notes concerning the bench marks used.

FORM 1 C.—818
REV. 4-61

State Form 1854

PAGE NO.

2-1

5M 12-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

I PROJ. NO. 100-1110

STR. NO.

CONTRACT NO. I-0000

ITEM BORROW

No. 2

DISTRIBUTION OF BORROW IN APPROXIMATE
PROPORTION TO PLAN QUANTITY IN BALANCES.

STATIONS	PLANS	PLACED	PIT VOLUMES	PG
2+90-26+40	25,712	25,559	25,609	2-2
26+40-40+00	50,316	50,388	75,300	2-3
40+00-52+80	25,316	24,812	100,909	
			- 150	1-3
TOTALS	101,344	100,759	100,759	

COMPUTED BY JD

CHECKED

PS

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

5M 3-79

I PROJ. NO. 100-1(1)0 STR. NO.

CONTRACT NO. I-0000

ITEM Borrow No. 2

STATIONS	END AREAS SQ. FT.		SUM OF END AREAS SQ. FT.		VOLUME CU. YDS.		TOTAL CU. YDS.		PAGE
	CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL	
			PIT # 1 ON SAM JONES'S PROPERTY						
			LEFT OF STATIONS 15 TO 25						
15+00	0		10		5				
+25	10		30		14				
+50	20								
5									
24+50	100	30	100	30	93	14			
+75	100	0	100		46				
25	0								
							26,210	← 601	
							- 601		
							25,609		7-

COMPUTED BY JD

CHECKED *RA*

CHECKED *LD*

FORM I. C.—627
Rev. 2-62
10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE NO. 3

I PROJ. NO. 100 SECTION 1100 STR. NO. _____ CONTRACT No. J-6000
ITEM PIAT EXCAVATION No. 3
OVERRUNS 4846 AT 0.60, 2907.60 UNDERRUNS _____ AT _____

[illegible]

COMPUTED BY 

CHECKED 20

FORM I C - 401
REV 3-8-63

State Form 35927

PAGE NO. 3-1

6M 3-79

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

I PROJ NO. 100-1(1)0 STR. NO.

CONTRACT NO. I-0006

ITEM PEAT EXCAVATION No. 3

STATIONS	END AREA SQ. FT.		SUM OF END AREAS SQ. FT.		VOLUME CU. YDS.		TOTAL CU. YDS.		PAGE
	CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL	
30	0								
+50	700								
31	1600		700		648				
+50	2250		2300		2130				
32	2287		3850		3565				
+50	2223		4537		4201				
33	1921		4510		4176				
+50	350		3744		3467				
34	0		1871		1732				
			350		324		20,243		

COMPUTED BY JD

CHECKED *RA*

TEST HOLES

Our General Instruction to Field Employees show sample field book notes for test holes. The pay lengths should be summarized on Form I.C. 615 then transferred to Form I.C. 627.

FORM I. C.—427
Rev. 2-62

TOM 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE NO. 4

I PROJ. NO. 100 SECTION 100 STR. NO. CONTRACT NO. I-0000
ITEM CASED TEST HOLES - 4" No. 4
OVERRUNS AT \$ UNDERRUNS 30 AT \$ 0.50 \$ 15.00

[illegible]

COMPUTED BY JD

CHECKED *RD*

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

I PROJ. NO. 100-1110 STR. NO. _____ CONTRACT NO. I-0000
 ITEM CASED TEST HOLES - 4" NO. 4

SUMMARY OF HOLE DEPTHS
PER CROSS SECTION

ORIGINAL NOTES

PG. 11; BOOK 1

STATION	DEPTHS
31	80'
+50	100'
32	108'
+50	109'
33	77'
<hr/>	
TOTAL	470'
TO PG. 4	

COMPUTED BY JDCHECKED PR

FORM I. C.—627
Rev. 2-62
10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

Page No.

5

I PROJ. NO. 100 SECTION 1(1)0 BTR. NO. CONTRACT NO. I-0000

ITEM 15 Belt

No. 5

OVERRUNS _____ AT \$ _____ \$ _____ UNDERRUNS 17.79 AT \$ 3.00 \$ 53,373.00

[illegible]

COMPUTED BY 

CHECKED *EP*

B BORROW FOR STRUCTURE BACKFILL

Payment for B Borrow for structure Backfill is to be made on the basis of plan quantities. Changes from the plan quantities must be approved. Request for approval of changes should be made on Form 1C 626. These requests should be made in cases where a major error in the original computations is found, where a structure is relocated so as to make a major change in the B Borrow required, or where a structure is added which requires B Borrow. Detailed computations are needed when approval of an adjusted quantity is requested. These may be placed in the record either with the item or with the 1C 626 Form.

Measurement of structure backfill material, by truck measurement or otherwise, is required only when the material is taken from a pit cross-sectioned for payment as another item. Then the total measured quantity used on structures is deducted from the pit, even if it is greater than the pay quantity for structures.

For each structure requiring granular backfill, the structure book should have a note that the structure was backfilled as planned or as otherwise approved. If the granular backfill came from common excavation or from a pit-crosssectioned for another item, the structure book should show the source. The planned and placed quantities can be transferred directly to Form 1C 627. The remarks column of Form 1C 627 should show references to approved changes. Reference to or a copy of the detailed computations should be included in the record.

FORM I. C. - 927
Rev. 2-62

10M 8-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORDPAGE No. 6

I PROJ. NO. 100 SECTION 1100 STR. NO. _____ CONTRACT NO. I-0000
 ITEM B BORROW FOR STRUCTIVE BACKFILL No. 6
 OVERRUNS 7 AT \$ 4.00 \$ 28.00 UNDERRUNS _____ AT \$ _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
STR. No. 11	7	0		7	ADJUSTMENT APPROVED IC 626; SEE pg. 70	70
12	7	7				
1	665	665				
13	45	45				
14	3	33	30		INCREASE APPROVED IC 626; SEE pg. 70	6-1
17	37	37				
ROAD PORTION	764	787	30	7	SUBTOTALS	
STR. No. 16	17	1		16	DECREASE APPROVED IC 626; SEE pg. 70	6-2
					E.R. #1 - TOTAL	
GRAND TOTAL	781	788	30	23		
ALL CHANGES FROM PLAN QUANTITY HAVE BEEN EXPLAINED AND APPROVED ON IC 626'S AS NOTED ABOVE.						
John Doe						

COMPUTED BY JD

CHECKED RD

FORM I. C. - 614

State Form 4288

PAGE No.

6-1

10M 9-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

I

PROJ. NO. 100

SECTION 1(1)0

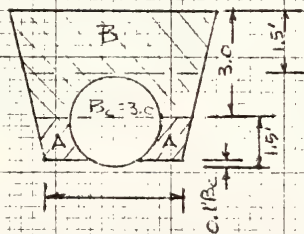
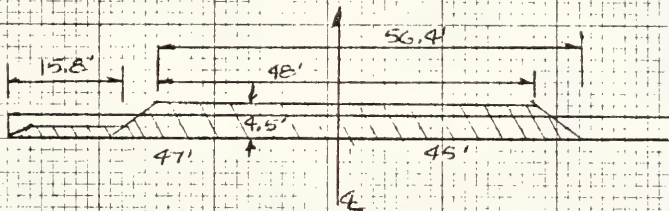
STR. NO.

CONTRACT NO. I-0000

DETAIL SKETCH

ITEM No.

6

B BORROW - STR. No. 14 STA. 30+00
92 ft. - 36" C.M. PIPEVOLUME A = 0.1005 cu ft.
FROM TABLE C06VOLUME A+B = 0.5530 cu ft.
FROM TABLE C06

$$15.8 \times 0.1005 = 1.6 \text{ cu}$$

$$56.4 \times 0.5530 = 31.2 \text{ cu}$$

$$32.8$$

SAY 33 cu TO PG. 6

QUANTITY ON PLANS 3 cu
OVERBURN 30 cu

SUMMARY

ITEM	QUANTITY	PASS

COMPUTED BY JD

CKD DR

FORM I. C. - 614

State Form 4288

PAGE No

6-2

10M 9-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

I

PROJ. NO. 100

SECTION 1000

STR. NO.

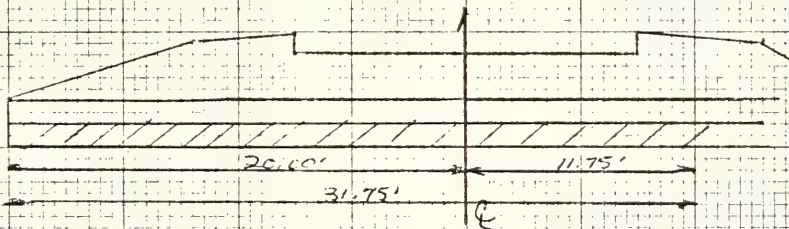
CONTRACT No. I. 0000

DETAIL SKETCH

ITEM No. 6

B BORROW - STA. No. 16 STA. 33100 P.R. #1
36 ft - 18" C.M. PIPE

BACKFILL METHOD B



FROM TABLE 003, VOLUME OF B BORROW IS 0.0385 cu/ft

$$0.0385 \times 31.75 = 1 \text{ cyd TO PG. 6}$$

VOLUME ON PLANS
UNDERRUN

17 cyd

16 cyd

SUMMARY

ITEM	QUANTITY	PRICE

COMPUTED BY JD

CKD RD

PAVEMENT REMOVAL

The original notes for removal items may be made either in a field book or on Form 1C 614. Computations should also be made on Forms 1C 614. Subtotals should be grouped as nearly as practical as the quantities shown on the plans are grouped. These subtotals are carried to Form 1C 627 for comparison to the planned quantities.

Computations may be made in a field book; sub-totals compiled in the field book and the totals carried to the 1C 627. All original notes must include the names of those highway employees compiling the original notes and taking the field measurements. It is suggested that plan and final quantities be computed on an 1C 615 rather than the 1C 627. Sketches in the field books should conform to those illustrated on page 7-1 and 7-2.

FORM I. C.—627
Rev. 2-62
10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No. 7

I PROJ. NO. 100 SECTION 1100 STR. NO. CONTRACT NO. I-0000
 ITEM PAVEMENT REMOVAL No. 7

OVERRUNS _____ AT _____

[illegible]

COMPUTED BY JD

CHECKED *CS*

FORM I. C-814

State Form 4208

PAGE NO.

10M 9-80

INDIANA STATE HIGHWAY COMMISSION

CONSTRUCTION RECORD

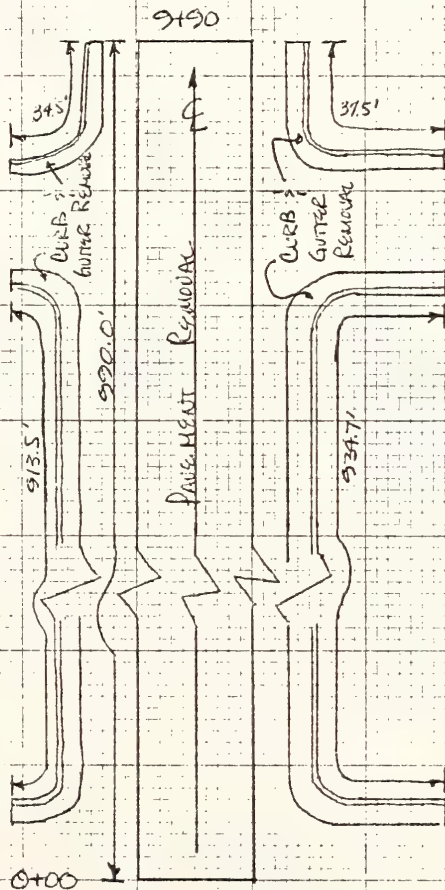
I PROJ. NO. 100 SECTION 1000 STR. NO.

CONTRACT NO. I-6600

ITEM NO. 7 & 9

DETAIL SKETCH

PAVEMENT REMOVAL & COMBINED CURB & GUTTER REMOVAL.



ORIGINAL NOTES

3-15-69

JD & TAPE

BD TAPE

COMPUTATIONSPAVEMENT REMOVAL

$$930 \times 20 = 2,200 \text{ S.F.}$$

COMBINED CURB & GUTTER REMOVAL

931.5'

34.5'

37.5'

934.7'

TOTAL 1,938.2'

SUMMARY

ITEM	QUANTITY	PAGE
7. PAVEMENT REMOVAL	2200.0	7
9 CURB & GUTTER REMOVAL	1,938.2	9

COMPUTED BY JD

CHKD PR

FORM I. C. - 614

State Form 4288

PAGE No.

7-2

10M 9-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

I

PROJ. NO. 100

SECTION 1000

STH. NO.

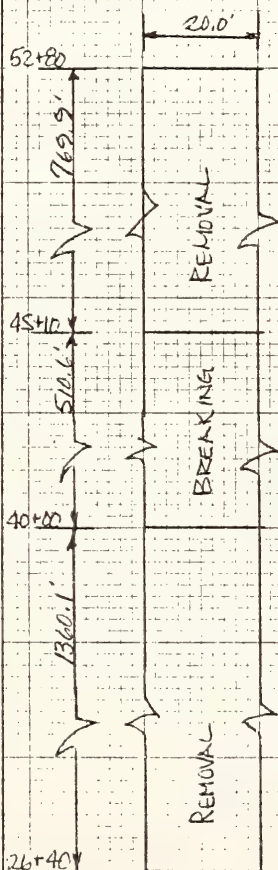
CONTRACT NO. I-1000

ITEM No.

718

DETAIL SKETCH

PAVEMENT REMOVAL & BREAKING



ORIGINAL NOTES

JD ~ JD
BD ~ BD

COMPUTATIONS

PAVEMENT REMOVAL

$$\frac{769.9 \times 20}{9} = 1710.9 \text{ SYD TO P. 7}$$

PAVEMENT BREAKING

$$\frac{510.6 \times 20}{9} = 1134.7 \text{ SYD TO P. 8}$$

PAVEMENT REMOVAL

$$\frac{1360.1 \times 20}{9} = 3022.4 \text{ SYD TO P. 7}$$

SUMMARY

ITEM	QUANTITY	PAGE

COMPUTED BY JD

CKD PJS

FORM I, C.- 627
Rev. 2-62

PAGE NO. 8

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

10M R-80

I PROJ NO. 100 SECTION 1150 STR. NO. CONTRACT NO. I-0000

ITEM PAVEMENT BREAKING No. 8

OVERRUNS 2 AT \$ 1.00 2.00 UNDERRUNS _____ AT \$ _____

[illegible]

COMPUTED BY JD

CHECKED *PA*

FORM I. C.—627
Rev. 2-62

PAGE No. 9

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

10M 8.80

CONSTRUCTION RECORD

I PROJ. NO. 100 SECTION 1100 STR. NO. _____ CONTRACT NO. I-0000

ITEM COMBINED CURB & GUTTER REMOVAL No. 9

OVERRUNS _____ AT \$ _____ UNDERRUNS 2 AT \$ 1.00 2.00

OVERRUNS _____ AT \$ _____ UNDERRUNS 2 AT \$ 1.00 2.00

[illegible]

COMPUTED BY JD

CHECKED RA

SUBBASE

Payment for subbase is made on the basis of plan quantity. This planned quantity can be revised by authorized changes which add to or decrease the original quantity.

A check of the plan quantities should be made to insure that there is no major or gross error. If this check does reveal that such an error exists, and that the error changes the total quantity by more than 2 percent, it will be necessary to recompute the entire quantity.

Any change in quantity should be computed and checked; then approval should be obtained on Form 1C 626. The approved changes added to or subtracted from the proposal quantity will be the final pay quantity.

The explanation of underruns or overruns on Form 1C 627 should contain this statement, "A sufficient check of the adjusted plan quantity has been made to insure that it has no major or gross error."

FORM I. C.—627
Rev. 2-62

Rev. 2-82

10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No. 10

CONTRACT NO. I-0000

ITEM SUBBASE No 10

OVERRUNS 300 AT \$ 4.00 \$ 1200.00 UNDERRUNS _____ AT \$ _____ \$ _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ENTIRE CONTRACT	5000	5300	300		ROAD PORTION	10-1
TWO CHANGES FROM PLAN QUANTITY ARE EXPLAINED AND APPROVED ON FORM IC-626, Pg. 71						
John Doe						

COMPUTED BY JD

CHECKED *RA*

FORM 1, C - 618
REV. 4-81PAGE NO. 10-1INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORDI PROJ. NO. 100-1100

STR. NO. _____

CONTRACT NO. 1-0000ITEM SUBBASENo. 10SUBBASE SUMMARYPROPOSAL QUANTITY 5000 CYD.

INCREASE DUE TO THICKENED

SUBBASE 39+75 TO 42+00432

PG. 10-3

SUBTOTAL

5432

DECREASE DUE TO SUBBASE

OMISSION 3+90 TO 5+05132

PG. 10-2

5300

TO PG. 10

COMPUTED BY

JD

CHECKED

RA

FORM I. C.—614

State Form 4288

PAGE No.

10-2

10M 9-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

I

PROJ. NO. 100

SECTION 1410

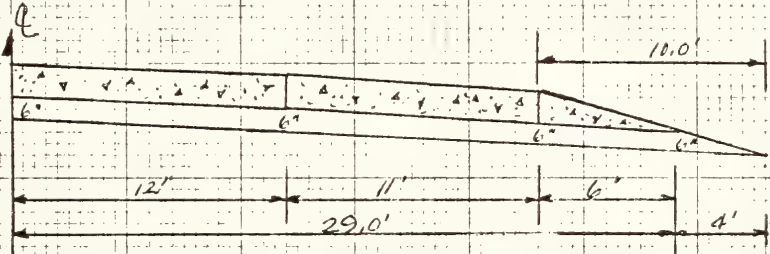
STR. NO.

CONTRACT NO. I-0000

DETAIL SKETCH

ITEM No. 10

SUBBASE

 $\frac{1}{2}$ CROSS SECTION (FROM STD. CROSS SECT. SHEET #1/E)

$$\frac{1}{2} \text{ AREA} = \frac{29.0 \times 6}{12} + \frac{1}{2} (4) \left(\frac{6}{12} \right) = 15.5 \text{ SF}$$

$$\text{TOTAL AREA} = 31.0 \text{ SF}$$

SUBBASE OMITTED STA. 3+90 TO 5+05 (FIELD BOOK #4)
P. 15

$$\text{VOLUME} = \frac{115 \times 31.0}{27} = 132 \text{ CYD}$$

TO P. 10-1

SUMMARY

ITEM	QUANTITY	PAGE

COMPUTED BY

JD

CHKD

RJR

FORM I. C. - 614

State Form 4288

PAGE No

10-3

10M 9-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

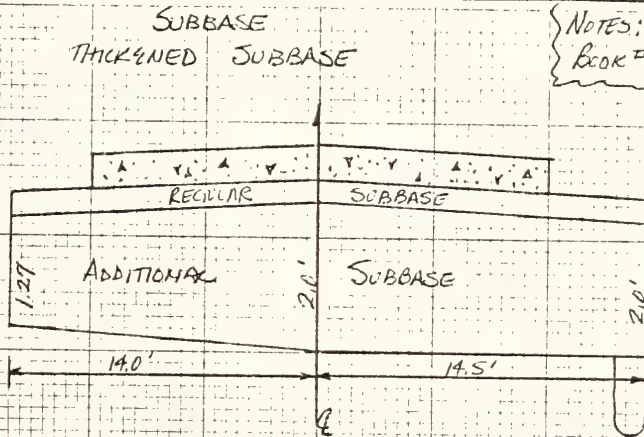
I PROJ. NO. 100

SECTION 1030 STR. NO.

CONTRACT NO. I-1000

DETAIL SKETCH

ITEM NO. 10



AREA:

$$14.0 \times \frac{1.27 + 2.00}{2} + 14.5 \times 2.00 = 51.89 \text{ SF}$$

THICKENED SUBBASE PLACED.

STA. 39+75 TO 42+00

$$\frac{225 \times 51.89}{27} = 432.4 \text{ cu yd TO P. 10-1}$$

SUMMARY

ITEM	QUANTITY	PAGE

COMPUTED BY JD

CKD

PR

AGGREGATE AND BITUMINOUS MIXES

This instruction is for aggregate and bituminous mix items which are paid for by weight.

An adding machine tape showing the total net weight should be attached to the tickets for each days run. The tape or an attached note should also show date, kind of material, number of loads and location(s) used. The weight tickets with this information attached will constitute the original notes for the item.

From these notes monthly Forms 1C 640A are prepared. A progressive total can be carried from sheet to sheet on these forms. The final total for the item or any portion of the item is then carried to a Form 1C 627 for comparison to the proposal quantity.

A Form 1C 615 should be used if it is needed to regroup quantities.

It is to be noted that adding machine tapes should show that the machine was cleared before each individual addition was started.

Weigh tickets for all aggregates should show the moisture content.

The original copies of Forms 640A, not zerox or carbon copies, should be placed in the Construction Records.

Pure calcium chloride and pug mill reports are to be included in the final. Inspector at the pug mill plant to prepare 1C 599 weight tickets on Ca Cl used. Tonnage of Pure Ca Cl is to be deducted from compacted aggregate.

10M 8-80

CONSTRUCTION RECORD

I PROJ. NO. 100 SECTION 11(1) STR. NO. _____ CONTRACT NO. T-0000

ITEM TYPE "P" COMPACTED AGGREGATE BASE No. 11

OVERRUNS _____ AT \$ _____ UNDERRUNS 149 AT 5.00 645.00

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
RURAL PORTION	7900	7751		149	SUBTOTAL	11-1
ACCESS ROAD	660	660				11-2
CONTRACT TOTAL	8560	8411		149		
<p>UNDERRUN LESS THAN 2%; A NORMAL VARIATION IN TONNAGE CONTROL.</p> <p style="text-align: center;">John Doe</p>						

COMPUTED BY JD

CHECKED *RA*

Form IC-640A
Rev. 3-76

ISM 8-80

INDIANA STATE HIGHWAY COMMISSION
DIVISION OF CONSTRUCTIONPage 11-1REPORT OF MATERIALS USED
AGGREGATE OR BITUMINOUS MIX

State Form 3404

Road I Sec. 1110
Course In Which
Material Is Used TYPE "D" BASEContract No. I-0000Project No. 100MONTH AUGUST, 1969

Fill In Day of Month Upon Which Work Is Done

Day of the Month	Material Laid Station to Station		Lineal Feet Laid	Square Yards	Number of Truck Loads	Designated Size of Aggregate or Bituminous Mix	Aggregate or Bituminous Mix Lbs.
8	26+30	Lf. APPROACH		175	11	53	220,600
9	26+30	Rt. "		175	11	53	210,800
12	SHOULDERS						
	0+50	24+35	2440	4609	65	53	2,552,000
	25+65	26+20					
13	0+50	24+35	2440	4609	66	53	2,608,000
	25+65	26+20					
	MAIN LINE AND SHOULDERS						
19	26+40	37+00	1060	6167	95	53	3,706,400
20	37+00	45+00	800	5156	79	53	3,084,600
22	45+00	52+00	700	5027	77	53	3,116,400
TOTALS							15,501,800

Engineer or
Inspector

APPROVED BY

John Doe

Contractor

A. B. AceTons This Month 7750.9

Tons Previously Reported _____

Tons Grand Total 7750.9 TO PG. 11

Form IC 640A
Rev. 8-76
15M 8-80

INDIANA STATE HIGHWAY COMMISSION DIVISION OF CONSTRUCTION

Page 11-2

REPORT OF MATERIALS USED

AGGREGATE OR BITUMINOUS MIX

State Form 3404

Road 1 Sec. 1(10)
Course In Which
Material Is Used TYPE "P" BASE

Contract No. I-0000

Project No. 100

MONTH JUNE, 1969

ACCESS ROAD

Fill In Day of Month Upon Which Work Is Done

Day of the Month	Material Laid Station to Station		Linear Feet Laid	Square Yards	Number of Truck Loads	Designated Size of Aggregate or Bituminous Mix	Aggregate or Bituminous Mix Lbs.
1	26+00	33+00	660	1320	42	53	1,320,900
TOTALS							1,320,900

APPROVED BY

Engineer or Inspector John Doe

Contractor A. B. Ace

Tons This Month 660.45

Tons Previously Reported _____

Tons Grand Total 660.45 TO PG. 11

10M 8.80

I PROJ. NO. 100 SECTION 1110 STR. NO. CONTRACT NO. I-0000
ITEM BITUMINOUS SURFACE No. 12
OVERRUNS 10.3 AT \$ 10.00 103.00 UNDERRUNS AT \$

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ROAD PORTION	515.0	525.0	10.0		SUBTOTAL	12-3
ACCESS ROAD	60.0	60.3	0.3			12-1
TOTAL CONTRACT	575.0	585.3	10.3			
<p>5 TONS OF THE OVERRUN TONNAGE IS DUE TO AN INCREASE IN THE LENGTH OF THE INTERSECTION AT 26+30. THE REMAINDER IS DUE TO THE LACK OF PERFECT TONNAGE CONTROL.</p> <p style="text-align: right;">John Doe</p>						

COMPUTED BY

CHECKED

Form IC-640A
Rev. 8-76
15M B-80

INDIANA STATE HIGHWAY COMMISSION
DIVISION OF CONSTRUCTION

Page 12-1

REPORT OF MATERIALS USED

AGGREGATE OR BITUMINOUS MIX

State Form 3404

Road I Sec. 100
Course In Which
Material Is Used SURFACE

Contract No. I-0000

Project No. 100

MONTH JUNE, 1969 ACCESS ROAD

Fill In Day of Month Upon Which Work Is Done

[illegible]

APPROVED BY
Engineer or Inspector John Doe
Contractor A. B. Ace

Tons This Month 60.30

Tons Previously Reported _____

Tons Grand Total 60.30 TO Aug. 12

Form IC 640A
Rev. 8-76
15M 8-80

INDIANA STATE HIGHWAY COMMISSION DIVISION OF CONSTRUCTION

Page 12-2

REPORT OF MATERIALS USED

AGGREGATE OR BITUMINOUS MIX

State Form 3404

Road T Sec. 1100
Course In Which
Material Is Used SURFACE

Contract No. I-0000

Project No. 100

MONTH SEPTEMBER, 1969

Fill In Day of Month Upon Which Work Is Done

Day of the Month	Material Laid Station to Station	Lineal Feet Laid	Square Yards	Number of Truck Loads	Designated Size of Aggregate or Bituminous Mix	Aggregate or Bituminous Mix Lbs.	
27	25+65	92+80	2715	7240	27	H.A.C.	664,700
30	9+90	24+35	1445	3853	13	H.A.C.	355,100

APPROVED BY

Engineer or Inspector John Doe

Contractor A. B. Ace

Tons This Month 509.90
Tons Previously Reported _____
Tons Grand Total 509.90
To P61.12-3

Form 1C-640A
Rev. 8-76
15M 8-80

INDIANA STATE HIGHWAY COMMISSION DIVISION OF CONSTRUCTION

Page 12-3

REPORT OF MATERIALS USED

AGGREGATE OR BITUMINOUS MIX

State Form 3404

Road I Sec. 100
Course In Which
Material Is Used SURFACE

Contract No. I-0000

Project No. 100

MONTH OCTOBER, 19 69 APPROACHES

Fill In Day of Month Upon Which Work Is Done

[illegible]

APPROVED BY

Engineer or Inspector John Doe

Contractor A. B. Doe

Tons This Month 15.15
Tons Previously Reported 509.90
Tons Grand Total 525.05
TO PER. 12

FORM 1. C.—427
Rev. 2-62

10M R-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No.

12

I PROJ. NO. 100 SECTION 1(1)0 STR. NO. _____

CONTRACT NO. I-0000

ITEM BITUMINOUS BASE

No 13

OVERRUNS 61.1 AT 9.00 549 90

UNDERRUN _____ AT _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ROAD PORTION	1980.0	2040.6	60.6			13-2
ACCESS ROAD	150.0	150.5	0.5			13-1
TOTAL CONTRACT	2130.0	2191.1	61.1			
<p>ABOUT 50 TONS OF THIS OVERRUN MATERIAL WAS REQUIRED FOR WEDGING AT THE END OF THE CONTRACT.</p> <p>John Doe</p>						

COMPUTED BY *JD*

CHECKED *PD*

Form IC-640A
Rev. 8-76
15M 8-80

INDIANA STATE HIGHWAY COMMISSION DIVISION OF CONSTRUCTION

Page 13-1

REPORT OF MATERIALS USED

AGGREGATE OR BITUMINOUS MIX

State Form 3404

Road I Sec. 100
Course In Which Material Is Used BITUMINOUS BASE

Contract No. I-0000

Project No. 100

MONTH JUNE, 1969

Access Road

Fill In Day of Month Upon Which Work Is Done

[illegible]

APPROVED BY

Engineer or Inspector J. A. Doe

Contractor A. B. Doe

Tons This Month 150.50

Tons Previously Reported _____

Tons Grand Total 150.50

TO PG. 13

Form IC-640A
Rev. 8-76
1FM 8-80

INDIANA STATE HIGHWAY COMMISSION
DIVISION OF CONSTRUCTION

Page 13-2

REPORT OF MATERIALS USED
AGGREGATE OR BITUMINOUS MIX

State Form 3404

Road I Sec. 1000
Course In Which
Material Is Used BITUMINOUS BASE

Contract No. I-0000

Project No. 100

MONTH SEPTEMBER, 1969

Fill In Day of Month Upon Which Work Is Done

Day of the Month	Material Laid Station to Station		Lineal Feet Laid	Square Yards	Number of Truck Loads	Designated Size of Aggregate or Bituminous Mix	Aggregate or Bituminous Mix Lbs.
		FIRST COURSE	MAIN	LINE			
3	26+40	40+00	1360	3627	26	HAC	152,000
4	40+00	52+80	1280	3413	25	HAC	778,200
		SECOND COURSE	MAIN	LINE			
10	26+40	45+00	1860	4960	37	HAC	1,098,800
11	45+00	52+80	780	2080	15	HAC	450,900
		RESURFACE	1/2	APPROACHES			
16	9+90 25+65 26+30	24+35 26+40 LT & RT	1920	4053 330	34	HAC	961,200
					</		

APPROVED BY
Engineer or Inspector John Doe
Contractor C. B. Ace

Tons This Month 2040.55

Tons Previously Reported _____

Tons Grand Total 2040.55

TO PG. 13

FORM I. C.—627
Rev. 2-62
10M 8-80

PAGE No 14

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

I PROJ. NO. 100 SECTION 1(10) STR. NO. _____ CONTRACT NO. I-0000
 ITEM BITUMINOUS MIXTURE FOR SHOULDER No. 14
 OVERRUNS _____ AT \$ _____ UNDERRUNS 19.8 AT 9.00 178.20

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ENTIRE CONTRACT	1911.0	1891.2		19.8	ROAD PORTION	14-1
SHOULDERS PLACED SUBSTANTIALLY AS PLANNED.						
John Doe						

COMPUTED BY JD

CHECKED *RD*

Form IC-640A
Rev. 8-76
15M 8-80

INDIANA STATE HIGHWAY COMMISSION
DIVISION OF CONSTRUCTION

Page 14-1

REPORT OF MATERIALS USED
AGGREGATE OR BITUMINOUS MIX

State Form 3404

Road I Sec. 1010
Course In Which
Material Is Used BIT. SHOULDER

Contract No. I-0000

Project No. 100

MONTH SEPTEMBER, 1969

Fill In Day of Month Upon Which Work Is Done

Day of the Month	Material Laid Station to Station		Lineal Feet Laid	Square Yards	Number of Truck Loads	Designated Size of Aggregate or Bituminous Mix	Aggregate or Bituminous Mix Lbs.
17	0+50	24+35 L					
	25+65	52+80 L	5100	5733	42	HAC BASE	1,261,400
18	0+50	24+35 R					
	25+65	52+80 R	5100	5733	42	HAC BASE	1,261,000
29	0+50	24+35 LR					
	25+65	52+80 LR	10,200	11,467	42	HAC "B"	1,260,000
TOTALS							3,782,400

APPROVED BY
Engineer or Inspector John Doe
Contractor R.B. Doe

Tons This Month 1891.2

Tons Previously Reported -

Tons Grand Total 1891.2

70 Pgs. 19

BITUMINOUS MATERIAL APPLIED

Similar to other items paid for by weight, the weigh tickets are the original notes. Complete data from each ticket is posted on Form 1C 26, where they are totaled for the various portions of the contract. These totals are compared to proposal quantities on Form 1C 627.

The original copies of Form 1.C. 26, not zerox or carbon copies should be placed in the Construction Record.

FORM 1, C.—627
Rev. 2-62
10M R-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

Page No. 15

1 PROJ. NO. 100 SECTION 1(1)0 BTR. NO. CONTRACT NO. I-0000

ITEM BITUMINOUS MATERIAL FOR PRIME COAT No. 15

OVERRUNS _____ AT \$ _____ \$ _____ UNDERRUNS 2.40 AT \$ 50.00 \$ 120.00

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ROAD PORTION	30.00	27.60		2.40	SUBTOTAL	15-2
ACCESS ROAD	2.00	2.00			SUBTOTAL	15-1
TOTAL CONTRACT	32.00	29.60		2.40		
<p>APPROXIMATELY 2 TONS OF THE ABOVE MATERIAL WAS USED FOR PRIME OVER EXISTING BITUMINOUS SURFACE. THIS WAS CHANGED BY EXTRA WORK AGREEMENT TO BITUMINOUS MATERIAL FOR TACK COAT. SEE PAGE 68.</p> <p style="text-align: right;">John Doe</p>						

COMPUTED BY JD

CHECKED *KB*

replaces

M26, M618 & IC618

4M 9-80

M26, M618 & IC618

QUANTITIES OF BITUMINOUS MATERIAL (BY WEIGHT) =

4M 9-80

COURSE
PRIME

COURSE PRIME fo

for Month of JUNE

1969

QUANTITIES OF BITUMINOUS MATERIAL (BY WEIGHT) =

Page 1 of 2 pages

Contract No. I-0000

Project No. 1-100-1110

Str. No. _____

Road _____ Sec. _____

Item No. 15 P.O. No. _____

Access Road

BIT. MATERIAL KIND MC-70

[illegible]

Prepared by DD
Checked by DD

= Weight material to the nearest 100 pounds
+ Compute tons to nearest one-hundredth of a ton

Sub-Total	2.00	(Tons)
Grand Total	2.00	(Tons)

to Feb. 15

FORM 1, C.—627
Rev. 2-62
10M 8-80

PAGE NO 16

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

1 PROJ. NO. 100 SECTION 1110 STR. NO. CONTRACT NO. I-0000
ITEM BITUMINOUS BASE WIDENING No. 16
OVERRUN AT 0 0 UNDERRUN 20.0 AT 11.00 220.00

[illegible]

COMPUTED BY JD

CHECKED *RS*

Form IC-640A
Rev. 8-76
15M 8-80

INDIANA STATE HIGHWAY COMMISSION DIVISION OF CONSTRUCTION

Page

16-1

REPORT OF MATERIALS USED

AGGREGATE OR BITUMINOUS MIX

State Form 3404

Road I Sec. 100
Course In Which
Material Is Used BIT. BASE WIDENING

Contract No. I-0000

Project No. 100

MONTH AUGUST, 1969

AUGUST, 1969

Fill In Day of Month Upon Which Work Is Done

Day of the Month	Material Laid Station to Station	Lineal Feet Laid	Square Yards	Number of Truck Loads	Designated Size of Aggregate or Bituminous Mix	Aggregate or Bituminous Mix Lbs.
1	FIRST COURSE 9+30 24+45 25+65 26+40 }	1530	1435	20	HAB #4	505,300
	SAME SECOND COURSE	1530	1351	19	HAB #4	475,200
	SAME THIRD COURSE	1530	1267	18	HAB #4	445,500
	TOTALS			57		1,426,000

Engineer or
Inspector

APPROVED BY

Tons This Month.

713.00

Tons Previously Reported

Contractor

Tons Grand Total

713.00
TO AG. 16

CONCRETE PAVEMENT

The original notes for rigid pavement items should be final chaining notes which show station equations, gaps, etc. These are transferred to Form 1C 611A for computations.

Intersections, crossovers, etc. should be sketched, usually on Form 1C 614, with computations. The original sketches may be made either in a field book or directly on the form 1C 614. Totals of separate portions of the contract are carried to Form 1C 627 for comparison to itemized proposal.

FORM I. C. - 627

Rev. 2-62

10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No.

17

I PROJ. NO. 100 SECTION 1100 STR. NO. _____ CONTRACT NO. I-0000
ITEM REINFORCED CONCRETE PAVEMENT- 10" No. 17
OVERRUNS _____ AT \$ _____ UNDERRUNS 254 AT \$ 7.00 \$ 1778.00

OVERRUNS _____ AT \$ _____ UNDERRUNS 254 AT \$ 7.00 178.00

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ENTIRE CONTRACT	3250	2996		254	ROAD PORTION	17
<p>THE PROPOSAL QUANTITY DID NOT PROVIDE FOR THICKENED PAVEMENT AT THE BRIDGE SEAT WHICH CAUSED AN OVERRUN OF 37 SQUARE YARDS. THERE IS A 288 SYD UNDERRUN CAUSED BY ONE LOAD OF CEMENT WHICH FAILED AFTER IT WAS USED. THIS CEMENT WAS ON IMMEDIATE USAGE AND THE AFFECTED PAYMENT IS PAID FOR AT AN ADJUSTED UNIT PRICE. SEE PAGE 65.</p> <p style="text-align: center;">John Doe</p>						

COMPUTED BY *VL*

CHECKED 

STATE HIGHWAY DEPARTMENT OF INDIANA

DIVISION OF CONSTRUCTION

CONTRACT NO. I-0000 **CONSTRUCTION RECORD**I PROJECT NO. 100 SECTION 1000 COUNTY _____

PAVEMENT

NORMAL WIDTH 24' PAVEMENT CHAINING: PG. 50, BOOK 4 NORMAL DEPTH 10"

Stations	Length	Width	Depth	Actual Sq. Yds. Surface	Equivalent Sq. Yds. of Normal Pav.	Remarks
0+00.0	499.6	24'	10"			
4+99.6						Chain Eq. -0.4'
5+00.0	250.4	"	"			
7+50.4						Chain Eq. +0.4'
7+50.0	240.0	"	"			
9+90.0						
	990.0	"	"	2640.0	2640.0	TOTALS 24' PAVEMENT
0+00	INTERSECTION			407.1	407.1	PG. 17-2
1+70						
24+35	BRIDGE APPROACH			100.2	118.7	PG. 17-3
24+55						
25+45	BRIDGE APPROACH			100.2	118.7	PG. 17-3
25+65						
	ROAD PORTION			3,247.5	3,284.5	TOTALS
	DEDUCT FOR FINISH CEMENT				288.0	PG. 17-4
			NET		2,996.5	PG. 17
			SAY		2,996	

NOTE: SKETCHES MUST BE INCLUDED IN CONSTRUCTION RECORD FOR ALL VARIATIONS FROM NORMAL WIDTH OR DEPTH.

FORM 1. C. - 614

State Form 4288

10M 9-80

INDIANA STATE HIGHWAY COMMISSION

PAGE NO.

17-2

CONSTRUCTION RECORD

I PROJ. NO. 100

SECTION 100

STR. NO.

CONTRACT NO. I-0000

DETAIL SKETCH

ITEM NO. 17

R.C. PAVEMENT

PAVEMENT COMPUTATIONS

$$(A) 22.0 \times 32.0 = 704.0'$$

$$(B) 12.0 \times 50.0 = 600.0'$$

$$(C) 12.0 \times 50.0 = 600.0'$$

$$(D) 28.0 \times 32.0 = 896.0'$$

$$(E) \frac{1}{2}(18.0 \times 18.0) = 162.0'$$

$$(F) \frac{25.4 \times 5.3 \times 16.2}{2} = 107.5'$$

$$(G) \frac{1.0 \times 12.0}{2} \times 110.0 = 715.0'$$

$$(H) 10.0 \times 1.0 = 10.0'$$

$$\text{TOTAL } 3663.7'$$

$$= 407.1 \text{ S.Y.D.}$$

$$C = 25.4$$

$$r = 5.3$$

$$12.0'$$

$$16.2'$$

$$50.0'$$

$$32.0'$$

$$22.0'$$

$$12.0'$$

$$28.0'$$

$$32.0'$$

$$12.0'$$

$$28.0'$$

$$32.0'$$

$$12.0'$$

$$28.0'$$

$$32.0'$$

$$12.0'$$

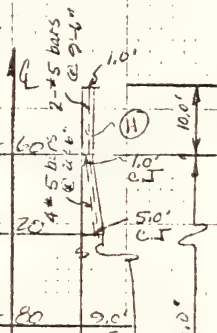
$$28.0'$$

$$32.0'$$

$$12.0'$$

$$28.0'$$

$$32.0'$$



ORIGINAL NOTES

J. Doe

B. Doe

10/15/69

CONTRACTION JOINT

0+40L 16.2

0+40R 16.2

0+80R 9.0

1+20R 5.0

1+50R 1.0

TOTAL 47.4'

REINFORCING STEEL

2 x 9.5 = 19.0'

4 x 26.5 = 82.0

TOTAL 101.0'

101 x 1.043th =

105 #

$$12.0'$$

$$16.2'$$

$$50.0'$$

$$32.0'$$

$$22.0'$$

$$12.0'$$

$$28.0'$$

$$32.0'$$

$$12.0'$$

$$28.0'$$

$$32.0'$$

$$12.0'$$

$$28.0'$$

$$32.0'$$

$$12.0'$$

$$28.0'$$

$$32.0'$$

$$12.0'$$

$$28.0'$$

$$32.0'$$

$$12.0'$$

BEGIN CONTRACT
PAVEMENT IN PLACE

INTEGRAL CURB

LEFT 30.5

RIGHT 34.5

TOTAL 65.0

COMPUTED BY JD

CKD RF

SUMMARY

ITEM	QUANTITY	PAGE
R.C. PAVEMENT	407.1	17-1
STEEL FOR PAVEMENT	105	18
CONTRACTION JOINT	47.4	19-1
INTEGRAL CURB	65.0	33

FORM I. C.-614

State Form 4288

10M 9-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

PAGE NO.

17-3

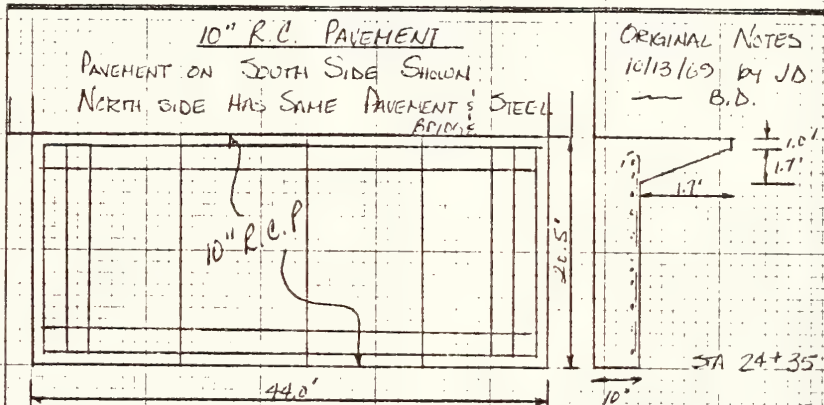
I PROJ. NO. 100 SECTION 1110 STR. NO.

CONTRACT NO. I-CCOO

DETAIL SKETCH

ITEM NO.

17

ORIGINAL NOTES
10/13/69 by JD
B.D.

22 #5 bars @ 22'-7"

#591 BARS @ 6" C.C. L = 20'-6"

PAVEMENT

$$44.0 \times 26.5 \times 4.5 = 100.2 \text{ SYD.}$$

$$\text{EXTRA VOLUME} = 44.0 \left(\frac{2.7 + 1.0}{2} \right) \times 1.7 = 138.4 \text{ CF}$$

$$\text{EQUIV VOLUME/SYD} = 3 \times 3 \times 14.2 = 7.5 \text{ CF/SYD}$$

$$138.4 \div 7.5 = 18.5 \text{ ADDED EQUIV. SYD.}$$

$$100.2 + 18.5 = 118.7 \text{ PAY QUANTITY}$$

STEEL

$$\#591 \text{ BARS} - 26.5 \times 88 = 1804$$

$$22.75 \times 22 = 500.5$$

$$\text{TOTAL } 2304.5$$

$$2304.5 \times 1.043 = 2404 \text{ LL}$$

SUMMARY

ITEM	QUANTITY	PAGE
R.C. PAVEMENT (SOUTH)	118.7	17-1
R.C. PAVEMENT (NORTH)	118.7	17-1
STEEL (NORTH)	2404	18
STEEL (SOUTH)	2404	18

COMPUTED BY JD

CKD RDO

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

I PROJ. NO. 100-1(10) STR. NO. _____ CONTRACT NO. I-0000
 ITEM REINFORCED CONCRETE PAVEMENT - 10" No. 17

COMPUTATION OF QUANTITY TO
 DEDUCT FOR FAILED IMMEDIATE USAGE
 CEMENT-LABORATORY NO. 69-1234

1 SQUARE YARD OF PAVEMENT - $\frac{10}{36}$ CUBIC YARD

$\frac{10}{36} \times 1.5 = \frac{5}{12}$ bbl OF CEMENT REQUIRED PER Sq. YD.

120 bbl FAILED.

$120 \div \frac{5}{12} = 288$ Sq YD AFFECTED
 TO PG. 17-1 & PG 65.

COMPUTED BY JDCHECKED PS

REINFORCING STEEL FOR PAVEMENT

Items such as this can be shown and computed on detail sheets with the pavement. From there go to 1C 627 Forms for comparison with the planned quantities.

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No 18

I PROJ. NO. 100 SECTION 1100 STR. NO. _____ CONTRACT NO. I-0000
ITEM REINFORCING STEEL FOR PAVEMENT No. 10
OVERRUNS 46 AT \$ 0.15 6.90 UNDERRUNS _____ AT \$ _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
1+50 Rr.	105	105				17-2
24+35 Br.	2381	2404	23			17-3
25+65 Br.	2381	2404	23			17-3
TOTAL CONTRACT	4867	4913	46		ROAD PORTION	
<p>OVER RUN DUE TO PLAN QUANTITY MAKING NO ALLOWANCE FOR THE LAP IN THE TRANSVERSE BARS AT THE CENTERLINE</p> <p style="text-align: right;">John Doe</p>						

COMPUTED BY JD

CHECKED

CONTRACTION JOINTS

The original notes for joints used in intersections should be with the pavement measurements. Original notes for main line joints can be either in a field book or on Form 1C 615 as shown on page 19-1.

FORM 1. C.-627
Rev. 2-62

10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE NO

19

PROJ. NO. 100 SECTION 1110 DTR. NO.

CONTRACT NO. I-0000

ITEM CONTRACTION JOINTS

No 1

OVERRUN 71 AT 1.50 106.50

UNDERRUNG_____AT _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
TOTAL CONTRACT	600	671	71		ROAD PORTION	19-1
OVERRUN DUE TO NO QUANTITY BEING ALLOWED FOR INTERSECTION AND TAPER.						
John Doe						

COMPUTED BY JD

CHECKED

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

I PROJ. NO. 100-1110 STR. NO. _____ CONTRACT NO. I-0000
 ITEM CONTRACTION JOINTS No. 19

MAIN LINE JOINTS 24' LONG

STATION TO	STATION	SPACING	NO. JOINTS	
0+40	1+60	40	4	ORIGINAL NOTES MAIN LINE JOINTS J.Doe R.Doe 11/1/69
0+75		-	1	
2+00	4+00	40	6	
4+30	4+60	30	2	
4+80	9+20	40	12	
9+55		-	1	
TOTAL	JOINTS		26	

$$26 \times 24 = 624 \text{ FEET}$$

ADDED FOR INTERSECTION 47 " PG. 17-2

TOTAL 671 FEET

TO PG. 19

COMPUTED BY JD

CHECKED RA

PIPE STRUCTURES

Tabulate quantities for Pipe Structures and Concrete Culverts on Form 1C 612B by taking the quantities directly from the Structure Books. Subtotal the contract divisions and transfer to Form 1C 627.

The explanation for the overruns and underruns should be made for each structure in the remark column at Form 1C 612B.

All structure pay quantities are to be shown on 1C 612B; included is 3X common, catch basins, inlets, man holes, end sections, class "A" concrete steel, etc. Reference totals direct to the 1C 627 for each item. Structure book notes are to include trench widths of all pipe structures.

FORM I. C.—677
Rev. 2-62

Rev. 2-62

10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE NO

20

I

PROJ. NO. 100

SECTION 100

STR. NO

CONTRACT NO.

I-0000

ITEM

PIPE: GROUP "A" 18"

No. 20

OVERBUND

L-

10

3

r.

15

2

UNDERBRUNN

AY

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ROAD PORTION	182	178		4		23-1
A.R. # 1	30	40	10			23-1
TOTAL CONTRACT	212	218	10	4		
<p>THE AMOUNT THAT EACH STRUCTURE LENGTH VARIED FROM THE PLANS IS EXPLAINED ON FORM IC-12B. SEE PG. 23-1.</p> <p style="text-align: right;">John Doe</p>						

COMPUTED BY JD

CHECKED *RA*

FORM 1. C.—627
Rev. 2-62

10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No. 21

I PROJ. NO. 100 SECTION 1070 DTR. NO. CONTRACT NO. I-0000
ITEM PIPE: GROUP "B" 36" No. 21

OVERRUN _____ AT _____ UNDERRUN _____ AT _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ENTIRE CONTRACT	182	182			ROAD PORTION	23-
<p>PLANNED LENGTH USED ON ALL 36" CULVERTS.</p> <p>John Doe</p>						

COMPUTED BY JD

CHECKED *RD*

FORM I. C.—627
Rev. 2-62

10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No.

22

I PROJ. NO. 100 SECTION 1(1)0 STR. NO. _____ CONTRACT NO. I-0000
 ITEM PIPE: GROUP "B" 42" No. 22

OVERRUN _____ AT 8 _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ENTIRE CONTENT	100	100			ROAD PORTION	23-
<p>PLACED PLANNED LENGTH ON ONE CULVERT.</p> <p style="text-align: right;">John Doe</p>						

COMPUTED BY JD

CHECKED

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

100-1001

CONTRACT NO. L-1000

ITEM

PIPE AND CONCRETE STRUCTURES

[illegible]

COMPUTED BY JF

CHECKED

SUBSURFACE DRAINS

The staking notes for subsurface drains should be supplemented to make them original notes for both the length of pipes laid and the volume of aggregate placed. If the trench width is less than 14 inches, a sketch showing the cross section or cross sections with stations used should be a part of the original notes.

The lengths of pipe to be paid for should be sketched and computed on Form 1C 614.

Aggregate can be computed on Form 1C 615 as shown.

Original staking notes are to include sketches for the particular sub-surface drain run. Summary of each day item used in a run, are to be shown in the field book. Summarize all day, items on an 1C 615. Field book sketches are to be prepared using (as a guide) those illustrated on pages 24-2 through 24-4. It is intended to eliminate as much as possible the copying of original notes.

FORM I. C.—627
Rev. 2-62
10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No. 24

I 100 PROJ. NO. 1100 SECTION BYR. NO. CONTRACT NO. I-0000
 ITEM 6" PIPE; GROUP "K" No. 24
 OVERRUNS AT \$ UNDERRUNS 305 AT 0.80 244.00

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ENTIRE CONTRACT	5,260	4,955		305	ROAD PORTION	24-1
<p>AT THE NORTH END OF THE JOB 40 FEET OF PIPE WAS PLACED MORE THAN 4 FEET DEEP. THIS IS PAID FOR AS A SEPARATE ITEM; SEE PAGE 64. THE 155 FT. OVERRUN IN THE TOTAL GROUP "K" PIPE USED IS DUE TO 4 TRANSVERSE DRAINS BEING PLACED UNDER THE PAVEMENT. THESE WERE USED TO ELIMINATE 120 FT. OF NON-PERFORATED PIPE.</p> <p style="text-align: right;">John Doe.</p>						

COMPUTED BY JD

CHECKED

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

I PROJ. NO. 100-1(120) STR. NO. _____ CONTRACT NO. I-0000
 ITEM 6" PIPE, GROUP "K" No. 24

SUMMARY OF SUBSURFACE DRAINS

STATION TO STATION		PIPE LENGTHS			FROM
		GROUP "K"	"K" 4-5 DEEP	AS N-PEEP PIPE	PAGE
0+00	9+90	1027		30	24-2
26+40	40+00	1747		30	24-3
40+00	52+80	2181	460	60	24-4
TOTALS		4955	460	120	

TO PG. 24 TO PG. 64 TO PG. 25

COMPUTED BY JDCHECKED RD

FORM I. C.-414

State Form 428B

PAGE No.

24-2

10M 9-89

INDIANA STATE HIGHWAY COMMISSION

CONSTRUCTION RECORD

I PROJ. NO. 100 SECTION 100 STR. NO.

CONTRACT NO. I-0000

DETAIL SKETCH

ITEM No. 24

6" PIPE, GROUP "K"

ORIGINAL NOTES
P. 11-12, BOOK 4

9+50

7+50

27'

PIPE, GROUP "K"

930'

27'

6+00 Tee

5'

7+50 Tee

5'

30'

6+00

NON-PERF. PIPE

1027'

TO P. 24-1

NON PERF. PIPE

30'

TO P. 24-1

930'

0+00

SUMMARY

ITEM	QUANTITY	PAGE

COMPUTED BY JD

CKD

RS

FORM I. C. - 614

State Form 4288

PAGE NO.

24-3

10M 9-80

INDIANA STATE HIGHWAY COMMISSION

CONSTRUCTION RECORD

I PROJ. NO. 100

SECTION 1(1)0

STR. NO.

CONTRACT NO. I-0000

DETAIL SKETCH

ITEM NO. 24

6" PIPE, GROUP "K"

SUBSURFACE DRAINS

ORIGINAL NOTES
PE. 13-14, BOOK 4

GROUP "K" PIPE

26+40 - 30+00 LT.	360.0
30+00 - 40+00 LT.	997.6
26+40 - 29+86 RT.	346.0
29+86 - 30+00 E	31.3
1 ELBOW 29+86 RT.	2.0
2 TEES 30+00 LT.	10.0

TOTAL 1746.9'

TO PG. 24-1

NON PERF. PIPE 30'

TO PG. 24-1

571.6
L = 1000.0' 573.6

INSIDE OF CURVE

30'

NON PERF.

30+00

31.3'

29+86

346.0

26+40

346.0

SUMMARY

ITEM	QUANTITY	PAGE

COMPUTED BY: JD

CHKD: RB

FORM I. C.-414

State Form 4288

PAGE NO.

24-4

10M 9-80

INDIANA STATE HIGHWAY COMMISSION

CONSTRUCTION RECORD

I

PROJ. NO. 100

SECTION 1100

STR. NO.

CONTRACT NO. I-0000

DETAIL SKETCH

ITEM NO. 24

6" PIPE, GROUP "K"

SUBSURFACE DRAINS

ORIGINAL NOTES
PP. 14-15, Book 7

GROUP "K" PIPE

40+00-50+00 LT.	100.0
40+00-51+00 RT.	110.0
40+00 L	28.0
40+50 E	28.0
2 TEES 40+00	10.0
3 TEES 48+50	15.0

TOTAL 2,181.0
TO P. 24-1

GROUP "K" PIPE

(1-5' DEEP)

50+00-52+80 LT.	280.0
51+00-52+80 RT.	180.0

TOTAL 460.0
TO P. 24-1

NON PERF PIPE

40+00 R	30.0
48+00 L	30.0

TOTAL 60.0
TO P. 24-1

30' Non PERF. PIPE

SUMMARY

ITEM	QUANTITY	PRICE

COMPUTED BY JD

CKD RB

FORM 1. C.—627

Rev. 2-62

10M R-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No. 25

PROJECT NO. 100 SECTION 1110 STR. NO. CONTRACT NO. I-0000

ITEM 6" F.B.C. NON-PERFORATED C.S. PIPE NO. 25

OVERRUNS _____ AT \$ _____ \$ _____
UNDERRUNS 120 AT \$ 150 \$ 180.00

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ENTIRE CONTRACT	240	120		120	ROAD PORTION	24-1
<p>3 OUTLETS WERE ELIMINATED BY USING TRANSVERSE PIPES UNDER THE PAVEMENT IN AREAS WITH VERY FLAT GRADES</p> <p style="text-align: right;">John Doe</p>						

COMPUTED BY JD

CHECKED

FORM I. C.—627
Rev. 2-62

10M B-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No

26

I PROJ. NO. 100 SECTION 1010 STR. NO. CONTRACT NO. I-0000
ITEM CURVERT END SECTIONS 12" No. 26

OVERRUNS _____ AT _____

[illegible]

COMPUTED BY JD

CHECKED *RA*

FORM I. C.—627
Rev. 2-62
10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No. 27

I PROJ. NO. 100 SECTION 11(D) STR. NO. CONTRACT NO. I-0000
ITEM CULVERT END SECTIONS 18" No. 27

OVERRUNS _____ AT _____ UNDERRUNS _____ AT _____

[illegible]

COMPUTED BY JD

CHECKED

FORM 1, C-619
REV. 4-61

State Form 1864

PAGE No.

28-1

SM 12-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

I PROJ. NO. 100-1(1)0 STR. NO. CONTRACT NO. 5-0000
 ITEM AGGREGATE FOR SUBSURFACE DRAINS No. 28

STATIONS	D	AVE DEPTH FT	LENGTH FT	VOLUME		STARTING NOTES pp 11-12; Book 9
				1/2 TRENCH	BETWEEN STA	
0+00-2+00	1.5	1.5	200	0.0530	10.6	
2+00-3+00	1.5, 1.7	1.6	100	0.0573	5.7	
	∫	∫	∫	∫	∫	
6+00-10+00	1.5	1.5	400	0.0530	21.2	
LATERAL TRENCH						
DOWN-UP	1.5	1.5	27	0.0530	1.4	

PAGE TOTAL 61.4

517.0 FROM P. 28-2

CONTRACT TOTAL 578.4 TO P. 28

COMPUTED BY

JD

CHECKED

PB

28-2

SM 12-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

I PROJ. NO. 100-1600

STR. NO.

CONTRACT NO. I-0000

ITEM AGGREGATE FOR SUBSURFACE DRAINS

No. 28

	STATIONS	AVERAGE DEPTH FT.	TRENCH LENGTH FT.	VOLUME - CYS.	
				PER LF TRENCH	BETWEEN STATIONS
LEFT SIDE	26+00 - 30+00	2.75	360	0.1070	38.5
	50+00 - 52+80	4.25	280	0.1718	48.1
RIGHT SIDE	26+40 - 28+00	2.25	160	0.0853	13.6
	28+00 - 29+86	3.30	186	0.1308	24.3
	29+86 - 40+00	~	GAP	~	
	51+00 - 52+80	4.15	180	0.1674	5.2
LATERALS	29+86E - 30+00L	3.8	28	0.1524	4.3
	40+00L - 40+00R	4.0	28	0.1610	4.5
	48+50L - 48+50E	3.0	14	0.1178	1.6
	48+50E - 48+50E	2.9	14	0.1221	1.7
				517.0	TO P. 28-1

COMPUTED BY JD

CHECKED *RA*

FORM I. C.—627
Rev. 2-52
10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No 29

I PROJ. NO. 100 SECTION 1000 STR. NO. _____ CONTRACT NO. I-0000
 ITEM CONCRETE, CLASS "A" FOR STRUCTURES No. 29
 OVERRUNS _____ AT \$ _____ UNDERRUNS 25 AT \$ 100.00 250.00

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ENTIRE CONTRACT	21.2	18.7		2.5	ROAD PORTION	23-
THE TOTAL PLANNED CONCRETE DID NOT EQUAL THE AMOUNT SHOWN IN THE PROPOSAL						
John Doe						

COMPUTED BY JD

CHECKED *lp*

RIPRAP

Original notes may be kept either in a field book or on Form 1C 614. Area computations should be made on Form 1C 614 or 615.

Specific methods of computing the quantity when the lower edge is constructed below grade is set out on Miscellaneous Standard Sheet MB2. This sheet also tells how toewall is to be converted to an equivalent surface area for payment.

Riprap may be paid for by the ton or the square yard.

FORM I, C.—627

Rev. 2-82

10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No.

31

I PROJ. NO. 100 SECTION 1(10) STR. NO. 100-1-111 CONTRACT NO. I-0000

ITEM. KPRAP

No. 31

OVERRUNS 151 AT \$ 10.00 \$ 1510.00 UNDERRUNS _____ AT \$ _____ \$ _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ENTIRE CONTRACT	230	381	151		SFR 100-1-1111	31
OVERRUN IS APPARENTLY DUE TO ALLOWANCE FOR TOEWALL BEING OMITTED IN PROPOSAL QUANTITY.						
John Doe						

COMPUTED BY JD

CHECKED *RD*

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

10M 9-80

PAGE NO.

31-1

PROJ. NO.

SECTION

-ATB- NO

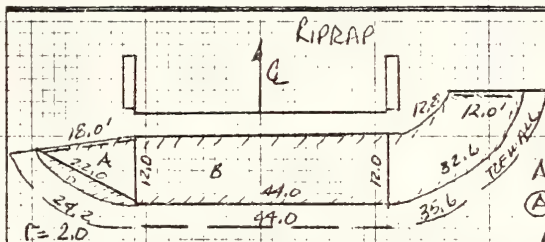
CONTRACT NO.

I-0000

DETAIL SKETCH

ITEM No.

31



ORIGINAL NOTES

M. J. Doe

14 E. Ave

Nov. 15, 1969

AREA

(A) $S = \frac{1}{2}(18.0 + 12.0 + 22.0) = 26.0$

$$A = \sqrt{(26.0)(8.0)(14.0)(4.0)} = 107.9^\circ$$

(6) $44.0 \times 12.0 = 528.0$

$$\textcircled{4} \quad 12 \left(\frac{12.8 + 32.6}{2} \right) = 272.4$$

(D) $2.0 \times 22.7 \times 6710 = 27.8^\circ$

NORTH TOTAL	938.14
-------------	--------

$$CH = 22.2$$

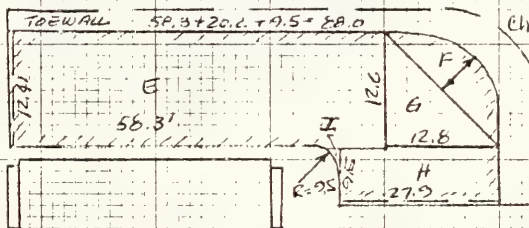
TOEWALLS:

SUM: $24.2 + 44.0 + 35.6 + 88.0 = 191.8'$

$$191.8 \times 0.64 = 122.8 \text{ SHD}$$

SIDE: $18.0 + 12.0 + 12.4 + 27.9 = 70.3'$

$$70,3' \times 0,37 = 26,0110$$

 $\phi = 17.5^\circ$ $r = 4.6$

AREA: (E) $58.3 \frac{12.4 + 12.6}{2} = 728.8 \text{ m}^2$

(F) $4.6 \times 17.5 \times .6997 = 56.3^{\circ}$

(7) $(12.6 \times 12.8) \frac{1}{2} = 80.6 \text{ m}^2$

④ $27.9 \times 9.5 = 265.05$

$$\textcircled{1} \quad 2.5^2 \times 2.46 \quad \text{is} \quad 9.4$$

$$\underline{268.2} = 232.0 \text{ sigA}$$

TOTAL SOUTH SIDE 1150.15'

TOE WALLS $122.8 + 26.0 = 148.8$ SCD

GRAND TOTAL SAY 381 TO P. 31

SUMMARY

QUANTITY

PAGE

COMPUTED BY

CKD

PAVED SIDE DITCH

A good place for the original notes for an item of this nature is in the field book, along with the staking notes. Then the lengths at each run shown on the plans can be compared with the placed length on Form 627.

Field measurement may be placed in a field book or on an 1C 615 form. Field measurement must include a lineal foot measurement, number of lugs, number of toe walls and total pay length. Compare plan and length placed on the 1C 627.

FORM I. C. - 427
Rev. 2-63

10M 8-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORDPAGE No. 32

I PROJ. NO. 100 SECTION 1010 STR. NO. _____ CONTRACT NO. I-0000
 ITEM PAVED SIDE DITCH, TYPE "A" No. 32
 OVERRUNS 45 AT 3.00 135.00 UNDERRUNS _____ AT _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	FROM PAGE BOOKS
24+70 - 24+70L	60	60.0				10
24+00 - 24+70R	60	80.0	20.0			11
25+30 - 26+00L	80	115.0	35.0			12
25+30 - 25+80R	60	60.0				13
TOTAL R-PORTION	260	315.0	55.0			
F.R. - 1						
31+00 - 31+40L	60	50.0		10.0		14
31+50 - 32+00L	60	60.0				14
TOTAL A.R. #1	120	110.0		10.0		
TOTAL CONTRACT	380	425.0	55.0	10.0		
NEKRUN	DITCH LENGTHS	AT	LOWER ENDS	TO		
CONTROL	EROSION					

COMPUTED BY JDCHECKED RA

FORM 1. C.-627
Rev. 2-63
10M 8-80

PAGE NO. 33

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

CONSTRUCTION RECORD

I-100 100 BTR. NO. CONTRACT NO. I-0000

ITEM INTEGRAL CONCRETE CURB. No. 33

OVERRUNS 6.0 AT 3.00 18.00 UNDERRUNS AT

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ENTIRE CONCRETE	59	65.0	6.0		RUN PORTION	17-2
SUBSTANTIALLY AS PLANNED						
John Doe						

COMPUTED BY JD

CHECKED *RLD*

FORM 1. C.—627
Rev. 2-62

10M R-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

Page No.

34

I PROJ. NO. 100 SECTION 1100 STR. NO. _____ CONTRACT NO. I-0000
ITEM GUARD RAIL, TYPE BA No. 34
OVERRUNS 3 AT \$ 7.00 21.00 UNDERRUNS _____ AT \$ _____

[illegible]

COMPUTED BY JD

CHECKED

FORM I. C. - 614

State Form 4288

PAGE NO.

34-1

10M 9-80

INDIANA STATE HIGHWAY COMMISSION

CONSTRUCTION RECORD

PROJ. NO.

100

SECTION

100

STR. NO.

CONTRACT NO.

I-0000

DETAIL SKETCH

ITEM NO.

34

ORIGINAL NOTES

J. Doe

R. Doe

Nov. 16, 1969

GUARD RAIL, TYPE B

21+02 - 23+55 Rt. 253.3

24+45 - 27+25 Rt. 80.0

TOTAL 333.3

GUARD RAIL, TYPE G

23+15 - 24+55 Lt. 140.0

23+55 - 24+55 Rt. 100.0

25+45 - 26+85 Lt. 140.0

25+45 - 26+45 Rt. 100.0

TOTAL 480.0

RAILING, TYPE 5

LEFT SIDE 89.75

RIGHT SIDE 89.75

TOTAL 179.50

SUMMARY

ITEM	QUANTITY	PAGE
GUARD RAIL, B	333.3	34
RAILING, TYPE 5	179.5	49
GUARD RAIL, G	480.0	67

COMPUTED BY

JD

CKD

RD

FENCE

Fence chaining notes may either be placed in a field book or recorded directly on Form 1C 614 as shown on pages 36-3 and 36-4. Form 1C 615 lends itself well for tabulating the fence lengths on each side of centerline as shown on pages 36-1 and 36-2.

FORM I. C.—427

Rev. 2-62

10M 8-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

PAGE No.

PROJ. NO. 100 SECTION 100 STR. NO. CONTRACT NO. I-0000

ITEM FENCE (E.F.T.) No. 36

OVERRUNS _____ AT 8 _____ S _____ UNDERRUNS 206 AT 0.60 S 123.60

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ENTIRE CONTRACT	10,560	10,354		206	ROAD SECTION	36
THE FENCE WAS BUILT AS THE PLANS INTENDED						
John Doe						

COMPUTED BY JD

CHECKED *RS*

FORM I. C. - 418
REV. 4-61

State Form 1864

PAGE No. 36-1

SM 12-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORDI PROJ. NO. 100-1(10)

STR. NO. _____

CONTRACT NO. I-0000ITEM FENCE (FET)No. 36

SKETCHES ON 36-3 & 36-4

STATIONS	LENGTHS	REMARKS
(LEFT) 0+30 - 1+00	73.0	CORNER CUT
1+00 - 5+00	401.0	
5+00 - 10+00	501.0	
10+00 - 23+00	1300.2	
23+00 - 23+60	67.0	
		BRIDGE
24+40 - 25+00	71.0	
25+00 - 25+75	75.0	
25+75 - 26+00	93.5	CORNER CUT
		PUBLIC ROAD
27+00 - 34+00	700.7	
34+00 - 36+00	201.0	
36+00 - 48+00	1201.2	
48+00 - 50+00	201.0	
50+00 - 52+80	280.0	
		END

5165.6 TOTAL FENCE LEFT SIDE

5188.0 FROM 36-2

10,353.6 TOTAL FEE PROJECT

SAY 10,354 TO P. 36

COMPUTED BY

JD

CHECKED

RD

FORM I. C. - 418
REV. 4-61

State Form 1864

PAGE No.

36-2

SM 12-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

I PROJ. NO. 100-1(1)0

STR. NO.

CONTRACT NO. I-0000

ITEM FENCE (FET)

No. 36

SKETCHES ON 36-3 & 36-4

STATION	LENGTH	REMARKS
(Right) 0+30 - 1+00	73.5	CORNER CUT
1+00 - 6+00	501.5	
6+00 - 11+00	500.8	
11+00 - 22+75	1175.0	
22+75 - 23+60	103.0	
		BRIDGE
24+40 - 25+00	70.5	
25+00 - 25+75	75.7	
25+75 - 26+00	84.0	CORNER CUT
		PUBLIC ROAD
27+00 - 27+50	71.0	CORNER CUT
27+50 - 48+00	2052.0	
48+00 - 50+00	201.0	
50+00 - 52+80	280.0	
		END

5188.0 TOTAL FENCE RIGHT SIDE

TC P. 36-1

COMPUTED BY JD

CHECKED

RQ

FORM I. C. - 414

State Form 4288

PAGE NO.

36-3

10M 8-80

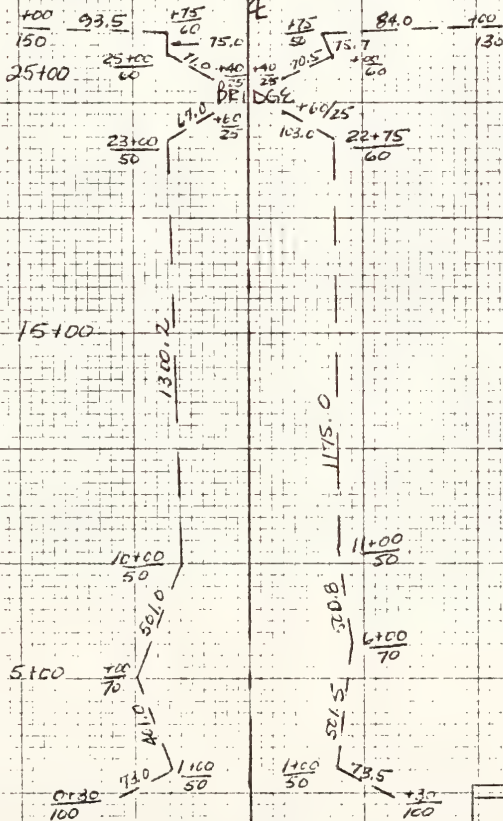
INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

PROJ. NO. 100 SECTION 1410 STR. NO.

CONTRACT NO. I-1000

DETAIL SKETCH

ITEM NO. 36

FENCE (F.F.T)
STA. 0+00 TO 26+30FENCE CHAINED
OCT. 16, 1969
J. DOE
R. DOECOMPUTATIONS ON
P.P. 36-1 & 36-2

SUMMARY

ITEM	QUANTITY	PAGE

COMPUTED BY JD

CKD RD

FORM I. C. - 614

State Form 4288

10M 9-80

INDIANA STATE HIGHWAY COMMISSION

CONSTRUCTION RECORD

PAGE NO.

36-4

I PROJ. NO. 100

SECTION 1100

STR. NO.

CONTRACT NO. I-0000

DETAIL SKETCH

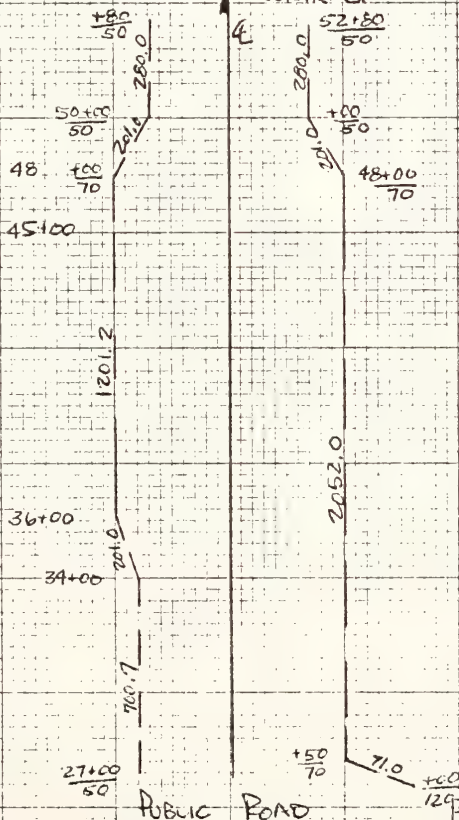
ITEM NO. 36

FENCE (F.F.T.)
STA 26+30 TO 52+80

Fence chained
Oct. 16, 1963

J. Doe
R. Doe

END CONTRACT



COMPUTATIONS ON
P.P. 36-1 & 36-2

SUMMARY

ITEM	QUANTITY	PAGE

COMPUTED BY JD

CKD

RP

SIGNS OR BARRICADES

Original notes for each pay item should list, and number, each sign or barricade used. This listing should show a date on which the sign or barricade was placed and also a date when it was no longer required at a given location. When a sign with the same message as one used previously is required, the listing should show that the original sign was reused. All movement of signs and barricades is in accordance with article 801.14 of the specifications. Include a sketch to pinpoint the location of all signs and barricades.

Original notes for all signing items shall be maintained in a field book and kept current. Listings shall include all information included above.

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE NO. 37

I PROJ. NO. 100 SECTION 1(10) STR. NO. _____ CONTRACT NO. I-0000
 ITEM STANDARD BARRICADES, TYPE "A" No. 37

OVERRUN _____ AT _____

[illegible]

COMPUTED BY JD

CHECKED *KS*

SODDING

Original notes may be kept on form 1C401A or in the field book. Areas that can readily be broken into trapezoids with their bases perpendicular to centerline should be tabulated on the left part of the sheet. If sketches are required, they should be shown on the right side of the sheet.

FORM I, C.—627
Rev. 2-62
10M 8-80

PAGE No 40

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

I PROJ. NO. 100 SECTION 1100 STR. NO. CONTRACT NO. I-0000
ITEM SODDING No. 40
OVERRUNS 609 AT \$ 0.90 548.10 UNDERRUNS AT \$

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ROAD PORTION	2700	2707	7			40-2
ACCESS ROAD	200	202	602			40-3
TOTAL CONTRACT	2900	3509	609			
<p>ADDITIONAL SOD WAS NEEDED IMMEDIATELY BEHIND THE FENCE ALONG THE ACCESS ROAD TO PREVENT DAMAGING EROSION.</p> <p>John Doe</p>						

COMPUTED BY JD

CHECKED

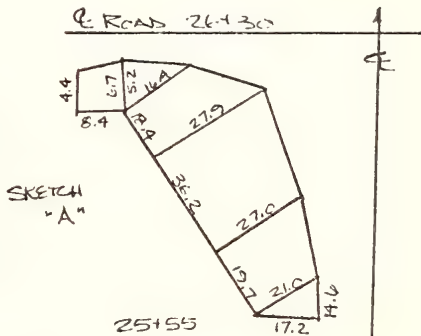
Page No. 40-1

6M 3-79

I Project No. 100 Section 1(1)0 Contract No. I-0000
ITEM SODDING (LEFT) ITEM No. 40

[illegible]

ORIGINAL NOTES 10/15/69 ☒ JD
NOTES, SKETCHES AND REMARKS ~ RD



AREA:

$$\begin{array}{rcl} 17.2 \times 14.6 \times \frac{1}{2} & = & 126 \\ \frac{1}{2} (21.0 + 27.0) 17.7 & = & 473 \\ \frac{1}{2} (27.0 + 27.5) 36.2 & = & 504 \\ \frac{1}{2} (27.5 + 16.4) 18.4 & = & 408 \\ 16.4 \times 5.2 \times \frac{1}{2} & = & 43 \\ \frac{1}{2} (6.7 + 4.4) 8.4 & = & 47 \\ \hline \text{TOTAL} & & 2091 \text{ ft}^3 \end{array}$$

SF LEFT SIDE ROAD PORTION
TO PG. 40-2

COMPUTED BY JD

CHECKED *RA*

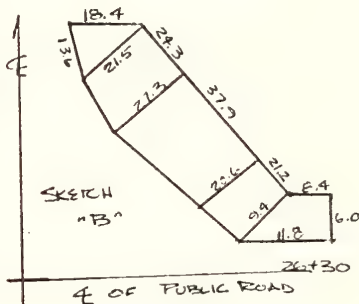
Page No. 40-2

6M 3-79

Project No. 100 Section 100 Contract No. I-0000
ITEM SODDING (RIGHT) ITEM No. 40

[illegible]

ORIGINAL NOTES 10/15/69 J.D.
NOTES, SKETCHES AND REMARKS ~ R.D.



AREA:

$$21.5 \times 13.6 \times \frac{1}{2} = 146$$

$$\frac{1}{2}(21.5 + 27.3) 29.3 = 593$$

$$\frac{1}{2}(27.3 + 20.6) = 23.95 \approx 24.0$$

$$\frac{1}{2}(20.6 + 9.4) 21.2 = 318$$

$$Y_2(11.8 + 8.4) 6.0 = 61$$

TOTAL 2026th

COMPUTED BY JD

CHECKED *RD*

FORM I.C. -401A State Form 35928
REV. 5-1-62

INDIANA STATE HIGHWAY COMMISSION

Page No. 40-3

SM 3-79

CONSTRUCTION RECORD

I Project No. 100 Section 100 Contract No. I-0000
 ITEM SODDING (ACCESS ROAD #1) ITEM No. 40

STATIONS	END WIDTH FEET	SUM OF END WIDTHS FEET	LINEAL DISTANCE	AREA SQ. FT.	TOTAL
<u>LEFT SIDE</u>					
<u>31+00</u>	<u>8.0</u>				
<u>32+45</u>	<u>8.0</u>	<u>16.0</u>	<u>145</u>	<u>1160</u>	
<u>+45</u>	<u>10.0</u>				
<u>+55</u>	<u>10.0</u>	<u>20.0</u>	<u>10</u>	<u>100</u>	
<u>+55</u>	<u>8.0</u>				
<u>33+00</u>	<u>8.0</u>	<u>16.0</u>	<u>45</u>	<u>360</u>	
			<u>TOTAL LEFT</u>	<u>1620</u>	
<u>RIGHT SIDE</u>					
<u>26+00</u>	<u>8.0</u>				
<u>32+00</u>	<u>8.0</u>	<u>16.0</u>	<u>700</u>	<u>5600</u>	
			<u>TOTAL RIGHT</u>	<u>5600</u>	
			<u>TOTAL ACCESS ROAD</u>		

NOTES, SKETCHES AND REMARKS

ORIGINAL NOTES
10/16/69

M - J. DOE
~ R. DOE

7220 SF
= 802 SYD
TO PG. 40

COMPUTED BY JDCHECKED ED

SEEDING ITEMS

The original notes for all of these seeding items are to be kept on weigh tickets, Form 1C 599. These should be grouped daily and posted on Form 1C 115 for summary. The sodding price includes the cost of limestone and fertilizer used under it. It is best to keep an accurate record of all fertilizer and limestone applied to the project, then deduct the theoretical quantities required for the sod to get the correct quantities to pay for as separate items.

Form 1C 647 is to be used for computing the percent of moisture in mulching material. The forms dated 4-1-72 have a formula shown which based the percent of moisture on the wet weight of the mulch. This is correct for the 1980 Specifications.

It should be noted that the moisture content is to be computed to the nearest 0.5% by specification.

There must be a statement on the 1C 627 that the agricultural lime and fertilizer used under the sod have been deducted.

FORM 1. C. - 627
Rev. 2-62

10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE NO

4.

I PROJ. NO. 100 SECTION 1610 STR. NO. CONTRACT NO. I-0000

ITEM FURNISHING & PLACING AGRICULTURAL LIMESTONE No. 41

OVERRUNS _____ AT \$ _____ \$ _____ UNDERRUNS 1.4 AT \$ 10.00 \$ 14.00

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ROAD PORTION	12.0	10.9		1.1		41-
ACCESS ROAD	1.0	0.7		0.3		41.1
TOTAL CONTRACT	13.0	11.6		1.4		
SUBSTANTIALLY AS DRAWN						
John Doe						

COMPUTED BY JD

CHECKED *KS*

FORM I. C. - 818
REV. 4-61

State Form 1864

PAGE NO.

41-1

5M 12-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

I PROJ NO. 100-1(12) STR. NO. CONTRACT NO. I-00000
 ITEM FURNISHING 3 PAVING AGRICULTURAL LIMESTONE No. 41

STATIONS	DATE	POUNDS
Ltr 0100-26130	10/1/65	12,000
Ltr 26130-52180	10/18/65	14,000
		26,000 TOTAL USED

FOOTED IN APPROXIMATE
PROPORTION TO AREAS SEEDED.

ROAD PORTION	24,000 #
ACCESS ROAD	2,000 #

PRODUCT FOR SD @ 2T/ACRE

ROAD PORTION	$\frac{2707}{4240} \times 4000 = 2237 \text{ lbs}$
ACCESS ROAD	$\frac{802}{4240} \times 4000 = 663 \text{ lbs}$

ROAD PORTION	$\frac{24,000 - 2237}{2000} = 10.9 \text{ TONS TO P. 41}$
ACCESS ROAD	$\frac{2,000 - 663}{2000} = 0.7 \text{ TONS TO P. 41}$

COMPUTED BY JD

CHECKED PP

FORM I. C.—627

Rev. 2-62

10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No.

42

I PROJ. NO. 100 SECTION 1100 STR. NO. _____

CONTRACT NO. 1-0000

ITEM FURNISHING & PLACING FERTILIZER

No 42

OVERRUNS _____ AT _____ UNDERRUNS _____ AT _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ROAD PORTION	1.20	1.20				42-1
ACCESS ROAD	0.10	0.10				42-1
TOTAL CONTRACT	1.30	1.30				
AS PLANNED						
John Doe						

COMPUTED BY JD

CHECKED *RD*

FORM I. C.—418
REV. 4-61

State Form 1964

PAGE NO.

42-1

BM 12-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

I PROJ NO. 100-1110

BYR. NO.

CONTRACT NO.

I-0000

ITEM FURNISHING ? PLACING FERTILIZER

NO.

42

STATIONS	DATE	POUNDS	REMARKS
0+00-26+30 L & R	10/2/69	150	USED UNDER SOIL
26+30-52+80 L & R	10/7/69	83	USED UNDER SOIL
0+00-40+00 R	10/10/69	800	
40+00-52+80 R	10/11/69	800	
52+80-40+00 L			
40+00-0+00 L	10/12/69	800	
		2633	TOTAL ROAD PORTION
		- 223	$= \frac{2707}{4840} \times 400$ - FOR SOIL
		2410	NET = 1.205 TONS
			TO P. #2
26+00-33+00 AR	10/9/69	66	USED UNDER SOIL
26+00-33+00 AR	10/12/69	200	
		266	TOTAL ACCESS ROAD
		- 66	$= \frac{802}{4840} \times 400$ - FOR SOIL
		200	NET = 0.100 TONS
			TO P. #2

COMPUTED BY JD

CHECKED

RB

FORM I. C.-627

Rev. 2-62

10M R-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE NO

43

I PROJ. NO. 100 SECTION 1000 BTR. NO. CONTRACT NO. I-0000
ITEM FURNISHING & PLACING SEED No. 43

OVERRUNS _____ AT 0 _____ 0 _____ UNDERRUNS _____ AT 0 _____ 0 _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ROAD PORTION	660	660				43-1
ACCESS ROAD	55	55				43-1
TOTAL CONTRACT	715	715				
AS PLANNED						
John Doe						

AS PLANNED

John Doe

COMPUTED BY JD

CHECKED

FORM I, C.—01B
REV. 4-61

State Form 1864

PAGE NO.

43-1

5M 12-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

I PROJ. NO. 100-1670

STR. NO.

CONTRACT NO.

I-0000

ITEM FURNISHING & PLACING SEED

No. 43

STATIONS	DATE	POUNDS
0+00 - 40+00 R	10/10/69	220
40+00 - 52+80 R	10/11/69	220
40+00 - 0+00 L	10/12/69	220
		660
		TOTAL ROAD PORTION TO P. 43
26+00 - 34+00 AR	10/12/69	55
		TOTAL ACCESS ROAD TO P. 43

COMPUTED BY JD

CHECKED

FORM I. C.-627
Rev. 2-62
10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No 44

PROJ. NO. 100 SECTION 100 BTR. NO. _____ CONTRACT NO. I-0000

ITEM FURNISHING & PLACING MULCHING MATERIAL No. 44

OVERRUNS 0.45 AT \$ 100.00 40.00 UNDERRUNS _____ AT \$ _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ROAD PORTION	12.00	12.4	0.4			14-
ACCESS ROAD	1.00	1.00				
TOTAL CONTRACT	13.00	13.40	0.40			
<p>THE 3% OVERRUN IS REASONABLE CONTROL FOR THE QUANTITY PLACED</p> <p style="text-align: right;">John A. Re</p>						

COMPUTED BY JD

CHECKED *KD*

I PROJ. NO. 100-1110 BTR. NO. CONTRACT NO. I-5000
ITEM FURNISHING & PLACING MULCHING MATERIAL No. 44

DELIVERY DATE	WEIGHT	% MOISTURE	WEIGHT ADJUST.	PAY WEIGHT
10/11/69	9,520	5.5 (P.44.2)		9520
10/12/69	9,250	10.5 (P.44.3)	9250 ($\frac{110}{105}$)	9210
10/13/69	8,020	3.0 (P.44.4)		8020
			TOTAL	26,750
	ALLOW FOR	ACCESS ROAD		2000
			=	1.00 TON TO PG. 44
	FOR ROAD PORTION	26,750		
		- 2000		
		24,750 =	12.375 TONS	
		SAY	12.40	
			TO PG. 44	

COMPUTED BY JD

CHECKED *CD*

44-2

I.C. 647
Rev. 4-1-72

10-M 9-73

Distribution:

Central Office
District Office
Project File

CONTRACT NO. I-0000PROJECT NO. 1-100-1000DATE: 10/11/69MOISTURE DETERMINATION FOR MULCHING MATERIAL

Sample No. _____

Weight of Wet Mulch and Container-----		<u>6.28</u>	lbs.
Less Weight of Container -----		<u>1.00</u>	lbs.
Net Weight of Wet Mulch -----	(A)	<u>5.28</u>	lbs.

Weight of Dry Mulch and Container-----		<u>6.00</u>	lbs.
Less Weight of Container -----		<u>1.00</u>	lbs.
Net Weight of Dry Mulch -----	(B)	<u>5.00</u>	lbs.

$100 \times \frac{(A-B)}{B} = M =$ Percent of moisture in Mulching Material to nearest 0.5 percent.

Computation: $\frac{(100)(0.28)}{5.00} = 5.6\%$ SAY 5.5%
TO Pg. 44-1

Remarks: THIS REPRESENTS STRAW SHOWN
ON IC 599 # 73632

Signed Robert Doe
Title INSPECTOR

Samples to be numbered consecutively.
Each weigh ticket for mulching material must bear its correct sample number.

44-3

I.C. 647
Rev. 4-1-72

10-M 9-73

Distribution:

Central Office
District Office
Project File

CONTRACT NO. I-0000PROJECT NO. I-100-1010DATE: 10/12/69MOISTURE DETERMINATION FOR MULCHING MATERIAL

Sample No. _____

Weight of Wet Mulch and Container----- 6.52 lbs.Less Weight of Container ----- 1.00 lbs.Net Weight of Wet Mulch ----- (A) 5.52 lbs.Weight of Dry Mulch and Container----- 6.00 lbs.Less Weight of Container ----- 1.00 lbs.Net Weight of Dry Mulch ----- (B) 5.00 lbs.

$100 \times \frac{(A-B)}{B} = M =$ Percent of moisture in Mulching Material to
nearest 0.5 percent.

Computation: $(100) \left[\frac{5.52 - 5.00}{5.00} \right] = 10.4\%$ SAY 10.5%
TO pg. 44-1

Remarks: THIS REPRESENTS ALL STRAW DELIVERED
ON 10/12/69

Signed Robert DoeTitle INSPECTOR

Samples to be numbered consecutively.

Each weigh ticket for mulching material must bear its correct sample
number.

44-4

I.C. 647
Rev. 4-1-72
10-M 9-73

Distribution:

Central Office
District Office
Project File

CONTRACT NO. I-0000PROJECT NO. I-100-1110DATE: 10/13/69MOISTURE DETERMINATION FOR MULCHING MATERIAL

Sample No. _____

Weight of Wet Mulch and Container-----		<u>6.15</u>	lbs.
Less Weight of Container -----		<u>1.00</u>	lbs.
Net Weight of Wet Mulch -----	(A)	<u>5.15</u>	lbs.

Weight of Dry Mulch and Container-----		<u>6.00</u>	lbs.
Less Weight of Container -----		<u>1.00</u>	lbs.
Net Weight of Dry Mulch -----	(B)	<u>5.00</u>	lbs.

$100 \times \frac{(A-B)}{B} = M =$ Percent of moisture in Mulching Material to nearest 0.5 percent.

Computation: $(100) \frac{(5.15-5.00)}{5.00} = 3.0\% \text{ Moisture}$
TO PG. 44-1

Remarks: THIS REPRESENTS ALL STRAW DELIVERED
ON 10/13/69

Signed Robert DoeTitle INSPECTOR

Samples to be numbered consecutively.
Each weigh ticket for mulching material must bear its correct sample number.

ITEMS: BRIDGE CONCRETE & REINFORCING STEEL

The quantities shown on the plans for these items are to be accepted as correct unless normal checking proves otherwise. If the quantities are found to be otherwise, then detailed calculations should be submitted with Form 1C 626 which corrects the plan quantity. When this procedure is followed, we can have the computations checked by the Division of Design. In some cases they will issue revised plans showing the corrected quantities.

This procedure should be followed for all classes of concrete and reinforcing steel for bridges. .

FORM I. C.—627

Rev. 2-62

10M R-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No.

45

I PROJ. NO. 100 SECTION 1070 STR. NO. 100-1-111

CONTRACT NO. I-0000

ITEM CLASS "A" CONCRETE IN SUPERSTRUCTURE No. 45

OVERRUNS _____ AT 8: _____ 8: _____ UNDERRUNS _____ AT 8: _____ 8: _____

[illegible]

COMPUTED BY JD

CHECKED *[Signature]*

FORM I. C.—627
Rev. 2-62
10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No 46

I PROJ. NO. 100 SECTION 100 STR. NO. 100-1-1111 CONTRACT NO. I-0000
 ITEM CONCRETE, CLASS "B" IN FOOTINGS No. 46

OVERRUNS _____ AT 0 _____ 0 _____ UNDERRUNS _____ AT 0 _____ 0 _____

[illegible]

COMPUTED BY JD

CHECKED *RP*

FORM I. C.—627

Rev. 2-62

10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE NO.

47

I PROJ. NO. 100 SECTION 1000 STR. NO. 100-1-111

CONTRACT NO. I-0000

ITEM CONCRETE, CLASS "B" ABOVE FOOTINGS

No. 47

OVERRUN _____ AT 8 _____ 8 _____ UNDERRUN _____ AT 8 _____ 8 _____

[illegible]

COMPUTED BY JD

CHECKED *RA*

FORM I. C.—627

Rev. 2-62

10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE NO

48

PROJ. NO. 100 SECTION 1100 STR. NO. 100-1-1111

CONTRACT NO. I-0000

ITEM REINFORCING STEEL

No. 55

OVERRUN 300 AT 0.15 45.00

UNDERRUNS

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
100-1-1111	25,460	25,760	300		TOTAL CONE.	48
<p>OVERRUN EXPLAINED AND APPROVED ON FORM K.626; PG. 69, <i>John Doe</i></p>						

COMPUTED BY JD

CHECKED *RS*

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

I PROJ. NO. 100-1000 STR. NO. 100-1-1111 CONTRACT NO. I-0000
 ITEM REINFORCING STEEL No. 48

STEEL WAS PLACED AS PLANNED

AN ERROR IN TABULATING THE REQUIRED STEEL
 WAS FOUND AND CORRECTED ON 10.626, SEE PG. 69.

PROPOSAL QUANTITY	25,460 [#]
CORRECTION	+ 300
TOTAL	25,760 [#]
	TO PG. 48

COMPUTED BY JDCHECKED RB

FORM I. C.—427
Rev. 2-62
10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No 50

I PROJ. NO. 100 SECTION 1100 BTR. NO. 100-1-1111 CONTRACT NO. I-0000
ITEM FURNISHING EQUIPMENT FOR DRIVING PILES No. 50

OVERRUNS _____ AT _____

[illegible]

COMPUTED BY J.D.

CHECKED *ps*

FORM I. C. - 518
REV. 4-51PAGE No 50-1INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORDI PROJ. NO. 100-1110 STR. NO. 100-1-1111 CONTRACT NO. I-0000
ITEM FURNISHING EQUIPMENT FOR DRIVING PILES No. 50

ORIGINAL NOTES

ONE SET OF EQUIPMENT WAS REQUIRED
AND FURNISHED.

TO PG. 50

John Doe

COMPUTED BY JDCHECKED RD

PILES FURNISHED AND DRIVEN

For timber piling, treated or untreated, a record of the piles order should be included in the Construction Record. The orders will justify the length of each pile placed in the leads. It should be recognized that the methods of producing timber piles does not lend itself to obtaining all of the length placed in the leads should not exceed the ordered length plus one foot.

For steel piling, the pay item is "Pile Shells Furnished and Driven" or steel H piles furnished and driven.

The pile driving records are the original notes. They should be verified and signed by a contractor representative at the time of placement. The final pay lengths to be paid for should be taken from the pile driving records, Form 1C 225. The total length placed in the leads is the length furnished. The total length below cut-off is the length driven and the pay length.

Form 1C 226, order for piling, should be included in the record as well as the pile driving record.

FORM I. C.—427

Rev. 2-62

10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE NO.

5

I PROJ. NO. 100 SECTION 1670 STR. NO. 100-1-111 CONTRACT NO. I-0000

ITEM TIMBER PILES FURNISHED, TREATED No. 51

OVERRUNS 150 AT \$ 2.00 \$ 300.00 UNDERRUNS _____ AT \$ _____ \$ _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
STR. 100-1-1111	400	550	150			52-2
<p>25 foot PILES WERE ESTIMATED, 35 foot PILES WERE REQUIRED.</p> <p>John Ore</p>						

COMPUTED BY JD

CHECKED *RS*

Form IC-226
Rev. 2-64

State Form 3187

INDIANA STATE HIGHWAY COMMISSION

2M 6-79

DIVISION OF CONSTRUCTION

ORDER FOR PILING

Contract No. I-0000Piling Order No. 1Structure No. 100-1-1111Date APRIL 15, 1969Project No. I-100-1(1)0To GENERAL CONSTRUCTION CO.
Contractor
NAPTOWN
INDIANA

This will be your authority to deliver to the site of the above mentioned structure

<input type="checkbox"/> concrete piles	} as listed below.
<input checked="" type="checkbox"/> treated timber piles	
<input type="checkbox"/> untreated timber piles	
<input type="checkbox"/> steel H piles	
<input type="checkbox"/> steel pile shells	

2 piles, each 30 feet long.
Number Length

 piles, each feet long.
Number Length

The tabulation of all piles ordered is as follows:

This order 2 piles, whose accumulated length is 60 Lin. Ft.
Number Length

Prev. ordered piles, whose accumulated length is Lin. Ft.
Number Length

Grand Total 2 piles, whose accumulated length is 60 Lin. Ft.
Number Length

Yours very truly,

John Doe
Title PROJECT ENGINEER

OPID TO CONTRACTOR
DUP TO CENT. OFFICE
TRIP TO DIST. OFFICE
QUAD. TO PROJ. FILE

Form IC-226
Rev. 2-64

State Form 3167

INDIANA STATE HIGHWAY COMMISSION

2M 6-79

DIVISION OF CONSTRUCTION

51-2

ORDER FOR PILING

Contract No. I-0000Piling Order No. 2Structure No. 100-1-1111Date APRIL 29, 1969Project No. I-100-1(1)0To GENERAL CONSTRUCTION Co.
Contractor
NAPTOWN
INDIANA

This will be your authority to deliver to the site of the above mentioned structure

<input type="checkbox"/> " concrete piles <input checked="" type="checkbox"/> treated timber piles <input type="checkbox"/> untreated timber piles <input type="checkbox"/> " steel H piles <input type="checkbox"/> " steel pile shells	}	as listed below.
--	---	------------------

14 piles, each 35 feet long.
 Number Length

 piles, each feet long.
 Number Length

The tabulation of all piles ordered is as follows:

This order	<u>14</u>	piles, whose accumulated length is	<u>490</u>	Lin. Ft.
	Number		Length	
Prev. ordered	<u>2</u>	piles, whose accumulated length is	<u>60</u>	Lin. Ft.
	Number		Length	
Grand Total	<u>16</u>	piles, whose accumulated length is	<u>550</u>	Lin. Ft.
	Number		Length	

Yours very truly,

John Doe
 Title PROJECT ENGINEER

OPIS. TO CONTRACTOR
 DUP. TO CENT. OFFICE
 TRIP. TO DIST. OFFICE
 QUAD. TO PROJ. FILE

5M 2.80 CONTRACT NO. I-0000
STRUCTURE NO. 100-1-1111
PROJECT NO. I-100-1110
TYPE STRUCTURE SLAB TOP

PILE DRIVING RECORD

52-1
SION
DATE 4/28/69
RECORD NO. 1
FOR TREATED TIMBER
TYPE OF PILING
LINK BOLT 440
TYPE HAMMER

[illegible]

NOTE:—On the back of this sheet make a sketch of each foundation reported on, numbering each pile and showing the points of the compass and the direction of flow of stream.

HM

SIGNED

TABLE 1

INDIANA STATE HIGHWAY COMMISSION

5M 2 80 CONTRACT NO. L-0000

DATE 5/12/69

STRUCTURE NO. 100-1-1111

RECORD NO. 2 & FINAL

PROJECT NO. I-100-1(1)0

FOR TREATED

TYPE STRUCTURE SLAB TOP

PILE DRIVING RECORD

TYPE OF PILING
LINK BELT 140
TYPE HAMMER

[illegible]

NOTE:—On the back of this sheet make a sketch of each foundation reported on, numbering each pile and showing the points of the compass and the direction of flow of stream.

SIGNED: John Doe

TITLE PROJECT ENGINEER

FORM I. C.—627
Rev. 2-62
10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

Page No. 53

I PROJ. NO. 100 SECTION 1(1)0 STR. NO. 100-1-111 CONTRACT NO. I-0000

ITEM STEEL "H" PILES FURNISHED & DRIVEN 12" No. 53

OVERRUNS _____ AT \$ _____ \$ _____ UNDERRUNS 3 AT \$ 10.00 \$ 30.00

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
160-1-1111	210	207		3		53-2
PILES HIT SOLID ROCK AT APPROXIMATELY THE ELEVATION SHOWN ON THE PLANS						
John Doe						

COMPUTED BY JD

CHECKED *RP*

53-

5M 2-80 CONTRACT NO. I-0000

DATE 5/14/69

STRUCTURE NO. 100-1-411

RECORD NO. 1

PROJECT NO. I-100-1(1)0

PILE DRIVING RECORD

FOR 12" "H"

TYPE STRUCTURE SLAB TOP

TYPE OF PILING
VULCAN #2

[illegible]

NOTE:—On the back of this sheet make a sketch of each foundation reported on, numbering each pile and showing the points of the compass and the direction of flow of stream.

SIGNIFIC

TITLE

DATE 5/15/69

RECORD NO. 24 FINAL

FOR 12" H

TYPE OF PILING
VULCAN #2
TYPE HAMMER

Henry Smith
GENERAL
5/15/69
Suff.
LAIST. Co.

TOTAL 8

John Doe
PROJECT ENGINEER

BRIDGE FOUNDATION EXCAVATION

Foundation excavation shall be paid for as the item or items shown on the plans, except that if Class X excavation is encountered where none was estimated, it shall be paid for at a unit price as set out in this specifications, Section 206. If Waterway Excavation or Common Excavation is made over the area occupied by the foundation, it shall be paid for as such.

The quantity for all classes of foundation excavation, except Class X Excavation, shall be within vertical planes 18 inches outside the neat lines of the footing, unless otherwise shown on the plans or specified. These limites may be extended to include excavation for a suitable sump but shall not exceed a horizontal area of more than 4% of the area of the footing.

The quantity for Class X Excavation shall be within vertical planes defining the neat lines of the footing.

Foundation Excavation (Unclassified): This item is sometimes, but not always, set up for grade separations. If no item is included in the proposal for these structures, no direct payment is made for foundation excavation. When the item is included in the contract, measurement is made from the original ground to the bottom of the footing.

Dry Excavation: Dry Excavation will be an item only where there is an item of Wet Excavation or Class X Excavation. Dry Excavation is measured between the original ground and the top limit of wet excavation. The top limit of wet excavation is shown on the plans and it is normally 1 foot above low water. If there is no item of dry excavation no direct payment is to be made for dry excavation.

Wet Excavation: This item includes all excavation between the upper limit of wet excavation and the bottom of the footing, unless Class X Excavation is encountered. The example shown in this guide shows average ground elevations, from a field book, as the top of wet excavation. When average ground elevations are used, all of the elevations averaged must be at or below the upper limits of the class or excavation being measured.

Class X Excavation: This item is defined in the specifications and it is usually solid rock. The limits, as stated above, are normally the neat lines of the footing or foundation seal.

FORM I. C.-427
Rev. 2-62
10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No. 54

I PROJ. NO. 100 SECTION 1(D) BTR. NO. 100-1-111 CONTRACT NO. I-0000
 ITEM WET EXCAVATION No. 54

OVERRUNS _____ AT _____ UNDERRUNS 13.1 AT 10.00 731.00

[illegible]

COMPUTED BY JD

CHECKED *RD*

FORM I. C. - 614

State Form 428B

PAGE NO.

54-1

10M 9-29

INDIANA STATE HIGHWAY COMMISSION

CONSTRUCTION RECORD

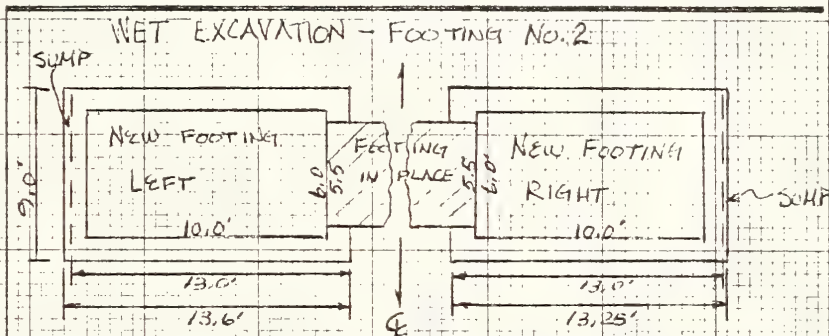
I PROJ. NO. 100 SECTION 100.0 STR. NO. 100-1-111

CONTRACT NO. I 6000

DETAIL SKETCH

ITEM NO.

54



LEFT SIDE

AREA INSIDE 18" LINE

$$13.0 \times 9.0 = 117.0^{\text{sq}}$$

$$\text{DEDUCT } 1.5 \times 5.5 = 8.2$$

$$\text{NET AREA} = 108.8^{\text{sq}}$$

ACTUAL ADDED FOR SUMP

$$0.6 \times 9.0 = 5.4^{\text{sq}}$$

$$\text{ALLOW. DIA. } 10.0 \times 4.0 = 2.4^{\text{sq}}$$

$$\text{ADD } 2.4^{\text{sq}}$$

TOTAL AREA TO PAY

$$\text{WET EXCAVATION } 111.2$$

UPPER LIMIT WET EXC.

$$100.0$$

AVE. GROUND ELEV

$$(P. 11, B.R.C. \#1) \rightarrow 97.0$$

BOTTOM FOOTING ELEV.

$$(P. 12, B.R.C. \#1) \rightarrow 94.0$$

DEPTH EXCAVATED 3.0

$$111.2 \times 3.0 \times \frac{1}{27} = 12.36 \text{ cu yd.}$$

RIGHT SIDE

AREA INSIDE 18" LINE

$$\text{SAME AS LT.} = 108.8^{\text{sq}}$$

ACTUAL FOR SUMP

$$0.25 \times 9.0 = 2.2^{\text{sq}}$$

4% IS 2A

$$\text{ADD } 2.2^{\text{sq}}$$

$$\text{TOTAL PAY AREA} = 111.0^{\text{sq}}$$

AVE. GROUND ELEVATION

$$(P. 11, B.R.C. \#1) \rightarrow 97.5$$

BOTTOM FOOTING

$$94.0$$

DEPTH

$$3.5$$

$$\frac{3.5 \times 111.0}{27} = 14.37 \text{ cu yd.}$$

$$+ \text{LEFT SIDE } 12.36 \text{ cu yd.}$$

$$26.75 \text{ SAY } 26.8 \text{ cu yd.}$$

SUMMARY

ITEM	QUANTITY	PAGE
WET EXCAVATION	26.8	54

COMPUTED BY J.D.

CKD RA

54-2

10M 9-89

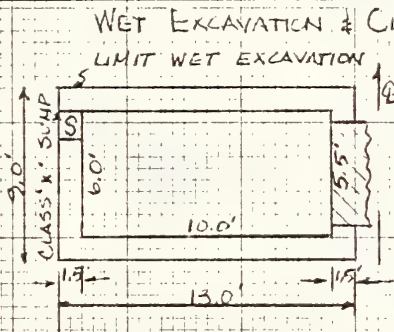
INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

I PROJ. NO. 100 SECTION 10.0 STR. NO. 100-1-111

CONTRACT NO. I-XXXX

DETAIL SKETCH

ITEM No. 54-55



LEFT SIDE SHOWN

RIGHT SIDE IS SAME SIZE
AND DEPTHS

UPPER LIMIT WET EXC.	100.0
AVG. GROUND ELEV.	97.3 ^{1.0}
AVG. TOP CLASS "X"	96.3 ^{2.3}
BOTTOM OF FOOTING	94.0

AREA FOR WET EXCAVATION $(13.0 \times 9.0) - (1.5 \times 5.5) = 108.75$
 VOLUME = $2 \times 108.75 \times 1.0 \times \frac{1}{27} = \underline{8.06 \text{ CYD}}$
 TO Pgs. 54

AREA OF CLASS "X" $10.0 \times 6.0 = 60.0$
 SUMP AREA $1.5 \times 1.5 = 2.2$
 TOTAL AREA 62.2 SF

VOLUME = $2 \times 62.2 \times 2.3 \times \frac{1}{27} = \underline{10.60 \text{ CYD}}$
 TO Pgs. 55

SUMMARY

ITEM	QUANTITY	PAGE
WET EXCAVATION	8.06	54
CLASS X EXCAVATION	10.60	55

COMPUTED BY

JD

CHK

PJS

FORM I. C.—627
Rev. 2-62
10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No. 55

I PROJ. NO. 100 SECTION 1110 STR. NO. 100-1-1111 CONTRACT NO. I-0000
 ITEM CLASS "X" EXCAVATION No. 55
 OVERRUNS 7.6 AT 20.00 152.00 UNDERRUNS _____ AT _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
100-1-1111	3	10.6	7.6		AGE #3	5A-2
<p>OVERRUN DUE TO ROCK ELEVATION SHOWN ON PLANS BEING IN ERROR.</p> <p>John Doe</p>						

COMPUTED BY JD

CHECKED *ea*

ITEMS: SIGNING COMPONENTS

Original notes for each sign constructed should be placed in a field book. These notes should show the exact location of the sign. Footing dimensions should be shown along with length and type of posts. The message should also be shown if the sign is such that the sign number will not reveal the message. The headings of Form 1C 612B may be altered for tabulation of the pay items in each individual sign.

Large signs which require considerable computation should be sketched on Form 1C 614 along with the necessary computations. Summary of the quantities for all signs are entered on Forms 1C 627 for comparison to the estimated quantity.

The "remarks" column on Form 1C 612B can be used to explain overrun or underrun quantities for individual signs.

FORM I. C.—627

Rev. 2-62

10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE NO

56

I PROJ. NO. 100 SECTION 1410 STR. NO. _____ CONTRACT NO. I-0000

ITEM TYPE "A" SIGN FACE (INCLUDES ALL COPY) NO. 56

OVERRUNS 75 AT \$ 8.60 \$ 645.00 UNDERRUNS _____ AT \$ _____ \$ _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ENTIRE CONTRACT	60	135	75		ROAD PORTION	56
ONE (1) 75 SE SIGN WAS ADDED ON K 626; PAGE 73.						
John Doe						

COMPUTED BY JD

CHECKED RA

FORM I. C. - 614

State Form 4289

PAGE No.

56-2

10M 9-89

INDIANA STATE HIGHWAY COMMISSION

CONSTRUCTION RECORD

I PROJ. NO. 100 SECTION 10C BTR. NO.

CONTRACT No. I-9000

DETAIL SKETCH

ITEM No. 50,53,61

FMS-1 SIGN

40+00 R

ORIGINAL NOTES
F11 BOK II

TYPE A SIGN FACE

$$15 \times 5 = 75 \text{ SF}$$

TO P. 56-1

15'
(TYPE 'A' FACE)

STRUCTURAL STEEL

$$(18+21) 36 = 1404 \text{ #}$$

$$93.59 \times 2 = 187 \text{ #}$$

$$\text{TOTAL } 1591 \text{ #}$$

TO P. 56-1

CLASS "B" CONCRETE FOR SIGNS

$$2 \times 8 \times \frac{(2.5)^2 \pi}{4} = 78.5 \text{ CF}$$

$$78.5 \times \frac{1}{2.7} = 29.1 \text{ CYD}$$

TO P. 56-1

18'-12" WF 36

21'-12" WF 36

8' x 36" DIA.
FOOTINGSPLATES 93.59#
EXH.
FROM SHEET II
OF PLANS

SUMMARY

ITEM	QUANTITY	PAGE

COMPUTED BY JD

CND

RR

FORM I. C.—427
Rev. 2-62

10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No. 57

1 PROJ. NO. 100 SECTION 1(10) STR. NO. _____ CONTRACT NO. I-0000
ITEM SHEET SIGNS (.080 MIN. THICKNESS) NO. 57

OVERRUNS _____ AT _____ 0 _____

[illegible]

COMPUTED BY *JH*

CHECKED *TV*

FORM I. C.—627

Rev. 2-62

10M 8-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

PAGE No 58

PROJ. NO. 100 SECTION 1000 BTR. NO. _____ CONTRACT NO. I-0000

ITEM SHEET SIGNS (100 MIN. THICKNESS) No. 58

OVERRUNS _____ AT _____

[illegible]

COMPUTED BY JD

CHECKED 

FORM I. C.—627
Rev. 2-62
10M 8-80

Page No.

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

I PROJ. NO. 100 SECTION 1000 STR. NO. _____ CONTRACT NO. I-0000
ITEM STRUCTURAL STEEL FOR SIGNS No. 59
OVERRUNS 1591 AT \$ 0.80 \$ 1272.80 UNDERRUNS _____ AT \$ _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ENTIRE CONTRACT	733	2324	1591		ROAD PORTION	56-1
ONE SIGN WAS ADDED AND APPROVED ON IC 626, PAGE 73						
John Doe						

COMPUTED BY JD

CHECKED *RA.*

FORM I. C.—627

Rev. 2-62

10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE NO

61

I PROJ. NO. 100 SECTION 1100 BTR. NO. _____ CONTRACT NO. I-0000
ITEM CLASS B CONCRETE FOR SIGNS No. 61
OVERRUNS 2.9 AT 150.00 935.00 UNDERRUNS _____ AT _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ENTIRE CONTRACT	2.0	4.9	2.9		ROAD PORTION	56
<p>VARIATIONS FROM PLAN QUANTITIES ARE EXPLAINED ON FORM IC 612B, SEE PG. 56-1. ADDITION APPROVED ON IC 626 ON PG. 73</p> <p style="text-align: right;">John Doe</p>						

COMPUTED BY JD

CHECKED *RE*

ITEM: PAINTED LINE

Original notes may be either on Form 1C 614, as shown on page 62-2, or in a field book. A summary and computations can be made on Form 1C 615. The totals are then carried to Form 1C 627.

It is to be noted that for a skip stripe, where a 3:5 ratio is painted, only $\frac{3}{8}$ of the total length is the pay length of painted line.

1C 599, weigh tickets, are to be prepared for paint used. This is to be done regardless of how "Paint for Traffic Stripe" is to be paid for. This is to be paid for by the lineal foot, not weight.

PAGE NO.

62

I PROJ. NO. 100 SECTION 1(10) STR. NO. _____

CONTRACT NO. I-0000

ITEM PAINTED LINE

No. 62

OVERRUNS _____ AT _____ . _____ .
UNDERRUNS 415 AT 0.25 . 103.75

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
0+40 - 52+80	13,000	12,585		415	ROAD PORTION	62-1
26+40 - 33+00	240	240			ACCESS ROAD	62-1
TOTAL CONTRACT	13,240	12,825		415		
<p>PAINTED LINES PLANNED AS INCIDENTAL CONSTRUCTION AT THE ENDS OF THE CONTRACT WERE NOT NEEDED BECAUSE IT HAD BEEN FRESHLY PAINTED BY OUR MAINTENANCE DIVISION.</p> <p style="text-align: right;">John Doe</p>						

COMPUTED BY JD

CHECKED *RR*

FORM I. C. - 618
REV. 4-61

State Form 1884

PAGE NO.

62-1

5M 12-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

I PROJ. NO. 100-1(1)0 STA. NO. _____ CONTRACT NO. I-0000
 ITEM PAINTED LINE No. 62

STATIONS	PAY LENGTHS	COMPUTATIONS FROM SKETCH P 62-2
		REMARKS
0+40 - 1+40	100	SINGLE YELLOW LEFT OF CENTER
0+40 - 25+90	5100	2x2550 EDGE STRIPES
0+40 - 52+80	1965	$\frac{3}{8}(2550+2650)$
24+90-25+90	100	SINGLE YELLOW RIGHT OF CENTER
26+70 - 27+70	100	SINGLE YELLOW LEFT OF CENTER
26+70 - 52+80	5220	2(2610) EDGE STRIPES
	12,585	TOTAL - ROAD PORTION
		TO P 62
26+60 - 33+00	240	(640) $\frac{3}{8}$ SKIP STRIPE
	240	TOTAL - ACCESS ROAD

COMPUTED BY

JD

CHECKED

RD

FORM I. C. - 614

State Form 4288

PAGE NO.

62-2

10M 9-80

INDIANA STATE HIGHWAY COMMISSION

CONSTRUCTION RECORD

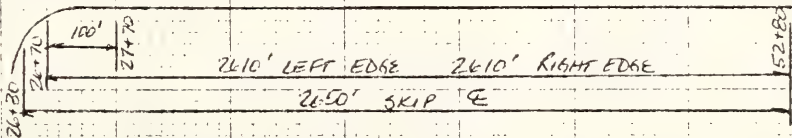
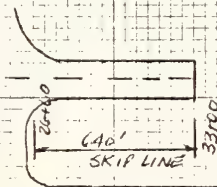
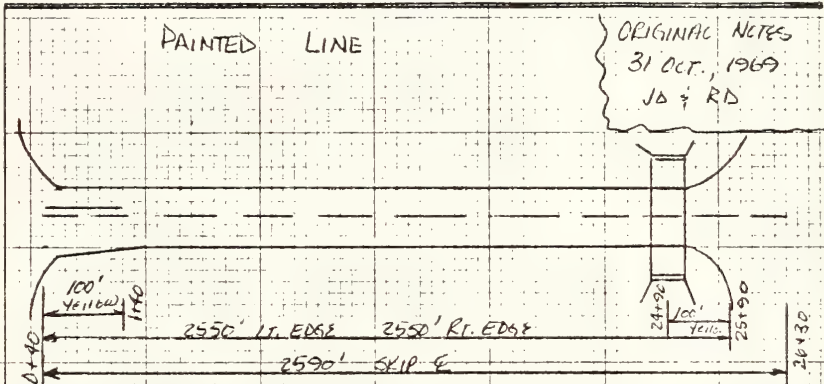
I PROJ. NO. 100 SECTION 11.10 STR. NO.

CONTRACT NO. I-0000

DETAIL SKETCH

ITEM NO. 62

PAINTED LINE

ORIGINAL NOTES
31 OCT., 1969
JD & RD

COMPUTATIONS ON P. 62-1

SUMMARY

ITEM	QUANTITY	PAGE

COMPUTED BY JD

CKD RE

EXCESSIVE OVERRUN/UNDERRUN ITEMS

Unless increased or decreased in quantities and alterations in plans materially change the character or the cost of the work, the contract unit price will be the rate of payment. Any adjusted price would have to be agreed to by all parties to the contract. Any adjustment will be based only on that portion of a major item over or under 20% of the contract quantity or on that portion of a minor item which exceeds 6% of the total bid amount of the contract.

In preparing the final construction record, a copy of all worksheets and the Central Office cover letter must be included with every 1C 626 and 1C 115.

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE NO. 63

I PROJ. NO. 100 SECTION 100 STR. NO. _____ CONTRACT NO. I-0000
 ITEM "B" BORROW AT ADJUSTED PRICE No. 63
 OVERRUNS 22,000 AT 2.9847 65,707.90 UNDERRUNS _____ AT \$ _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ENTIRE CONTRACT	0	22,000	22,000		TOTAL ON ROAD PORTION	63-1
<p>THIS PRICE WAS ADJUSTED BY NEGOTIATIONS BETWEEN THE PARTIES. OVERRUN IS EXPLAINED ON K. 626, PG. 63-3.</p> <p style="text-align: right;">John Doe</p>						

CHECKED *RP*

CHECKED *pe*

Page

Tons This Month _____

Tons Previously Reported _____

Tons Grand Total _____

INDIANA STATE HIGHWAY COMMISSION
RECOMMENDED CHANGE IN PLANS, MATERIALS OR QUANTITIES

The following change is recommended. (Give location, description and reason) PEAT EXCAVATION
AND "B" BORROW OVERLAP DUE TO PEAT AND MARL DEPTHS
BEING GREATER THAN THAT USED IN ESTIMATING PLAN QUANTITIES.
AN ADJUSTED "B" BORROW PRICE WAS NEGOTIATED AND
AGREED TO BY BOTH PARTIES AS SET OUT IN ARTICLE
109.03 OF THE SPECIFICATIONS.

By John Jones Title D.C.E. Date 2 MAY '69
Recommended for Approval Paul Jones District Engineer Date 2 MAY '69
Authorized N.W. Shein
~~Not Authorized~~ Title Chief Hwy Eng Date 9 MAY '69

FORM I. C.—627
Rev. 2-62
10M 6-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No.

69

I PROJ. NO. 100 SECTION 1100 STR. NO. _____ CONTRACT NO. I-0000
ITEM 6" GROUP "K" PIPE (4'-5' DEEP) No. 64
OVERRUNS 460 AT \$ 0.88 404.80 UNDERRUNS _____ AT \$ _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ENTIRE CONTRACT	0	46.0	46.0		ROAD PORTION	24
<p>46.0 FEET OF PIPE WAS PLACED OVER 4 FEET DEEP AT THE NORTH END OF THE LOT TO DRAIN A SAND STRATA. PAYMENT FOR 4.5 FEET DEPTH AT 1.10 TIMES BID PRICE IS PROVIDED FOR IN ARTICLE 718.09 OF THE SPECIFICATIONS</p> <p style="text-align: right;">John Doe</p>						

COMPUTED BY *JD*

CHECKED *PD*

ADJUSTED PRICE FOR FAILED MATERIAL

The Specifications allow the Engineer to permit immediate usage material which has been incorporated into the work prior to testing to remain in place even if the material fails. There may also be other reasons for failed material. In any event, the deduction to be applied will be determined by the Failed Material Committee.

In this example, the Failed Material Committee has determined that the deduction should equal the invoice price of the failed material.

The first step is to determine the number of pay units in which the failed material was used. In this example we assume that 120 barrels of cement failed. The cement was used in 10" pavement at the rate of 1.5 barrels per cubic yard.

The second step is to determine the amount that the price of each square yard is reduced in price by dividing the invoice price of the cement by the number of square yards affected.

This amount is subtracted from the bid price to obtain the adjusted unit price for payment of the item in which the failed material was used.

FORM 1. C.—427
Rev. 2-62

10M 8-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

PAGE No.

65

I PROJ. NO. 100 SECTION 1100 STR. NO. CONTRACT NO. I-6600
ITEM REINFORCED CONCRETE PAVEMENT, 10" (Adj. PRICE) No. 65
OVERRUNS 288. AT 5.33 1535.04 UNDERRUNS AT

OVERRUNS 2883 AT 5.33 1535.02 UNDERRUNS _____ AT _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ENTIRE CONTRACT	0	288	288			17-
<p>THE PRICE WAS ADJUSTED ON THIS PAVEMENT DUE TO FAILED IMMEDIATE USAGE CEMENT. SEE IC 626; PAGE 65-1</p> <p style="text-align: right;">John Doe</p>						

COMPUTED BY JD

CHECKED

65-1

Form I.C. 626

Rev. 5-27-68

State Form 35929

INDIANA STATE HIGHWAY COMMISSION
RECOMMENDED CHANGE IN PLANS, MATERIALS OR QUANTITIES

5M 3-79

I Proj. 100 Sec. 1 (110) Contract No. I-0000

The following change is recommended. (Give location, description and reason) TO DELETE THE QUANTITY OF 10" R.C. PAVEMENT IN WHICH 120 BBL. OF FAILED, IMMEDIATE USAGE CEMENT WAS USED, AND TO ESTABLISH A UNIT PRICE FOR THE PAVEMENT BY ARTICLE 106.01 OF THE SPECIFICATIONS.

CONTRACT ITEM	UNIT PRICE	INCREASE		DECREASE		% OF CHANGE
		QUANT.	AMT.	QUANT.	AMT.	
17. REINF. CONCRETE PVT 10"	7.00			288	2016.00	-9 P.17
15. REINF. CONCRETE PVT 10"	5.33	288	1535.04			
ADJUSTED PRICE						
THIS CHANGE DOES NOT RESULT IN A CUMULATIVE CHANGE OF 20% TO ANY ITEM CONSTITUTING 5% OF THE ORIGINAL CONTRACT		TOTALS		1535.04	2016.00	
NET		DECREASED		ESTIMATED COST \$		480.96

Signed John A. Lee Title PROJECT ENGINEER Date 31 AUG, 1969

Notification and consent to this change in plans is hereby acknowledged.

Contractor GENERAL CONSR. CO. By A. B. Lee Date 31 AUG, 1969

Investigated and the following recommendations made: APPROVAL

By John Jones Title D.C.E. Date 4 AUG, '69
 Recommended for Approval Paul Jones District Engineer Date 4 AUG '69
 Authorized Robert Roll
 Not Authorized _____ Title CHIEF DIV OF CONSR. Date 8 AUG '69

I-100-1(1)D
CONTRACT I-0000

65-2
2 of 3

WORK SHEET FOR I.C. 626

FAILED IMMEDIATE USAGE CEMENT
LAB No. 69-1234

1 SYD OF PAVEMENT = $10/36$ CYD.

$\frac{10}{36} \times 1.5 = 5/12$ bbl of CEMENT REQ'D PER SYD.

$120 \text{ bbls} \div 5/12 \text{ bbl/syd} = 288 \text{ syd. PAVEMENT INVOLVED.}$
TO PPS. 17-1 $\frac{1}{2}$ 65-1

$\$480.00 / 288 = \$1.67 / \text{syd}$ COST OF CEMENT

$\$7.00 - \$1.67 = \$5.33 / \text{syd}$ ADJUSTED PRICE

JD
8/31/69

I-100-1(1)0
CONTRACT I-00000

65-3
3 of 3

INVOICE

ACME CEMENT CORPORATION
GREEN CITY, INDIANA

TO: GENERAL CONSTRUCTION Co.
INDIANAPOLIS, INDIANA

120 bbl. TYPE 1A CEMENT @ \$14.00 BBL - \$1680⁰⁰.

ADDITIONAL EXCAVATION

Computations and sketches are to be made for this type of item, on Form 1C 614.

In order for the record and final estimate to correctly show how payment is made, the quantity to be paid for should not be altered to include it with common excavation. A separate item should be made with the true quantity and true unit price shown. A reference to the specification which justifies the price should be made on Form 1C 627. Refer to article 715.12 in the specifications.

FORM I. C.—627
Rev. 2-62
10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE No 66

I PROJ. NO. 100 SECTION 1(10) STR. NO. _____ CONTRACT NO. I-0000
 ITEM ADDITIONAL EXCAVATION No. 66
 OVERRUNS 15 AT \$ 2.10 31.50 UNDERRUNS _____ AT \$ _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
ENTIRE CONTRACT	0	15	15		ACCESS RD #1	66-1
<p>UNSTABLE MATERIAL UNDER STRUCTURE 16 WAS EXCAVATED WITH PAYMENT AT THREE TIMES THE PRICE BID FOR COMMON EXCAVATION, AS ARTICLE 715.12 OF THE SPECIFICATIONS PROVIDES.</p> <p>John Doe</p>						

COMPUTED BY JD

CHECKED *K15*

FORM I. C. - 814

State Form 4288

PAGE NO.

06-1

10M 9-89

INDIANA STATE HIGHWAY COMMISSION

CONSTRUCTION RECORD

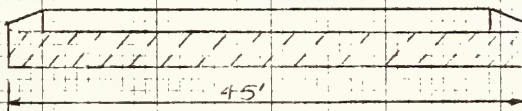
I PROJ. NO. 100 SECTION 100 STR. NO. CONTRACT NO. I-0000

DETAIL SKETCH

ITEM NO. 16

ADDITIONAL EXCAVATION
STR #16 - 33+00 F.R. #1

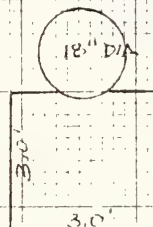
EXCAVATION OF UNSUITABLE MATERIAL BELOW PIPE
FROM P. 26 BOOK 5



$$\text{VOLUME} = \frac{3 \times 3 \times 45}{27} = 15 \text{ CYD. TO PG. 66}$$

PAY @ 3 TIMES COMMON PER
ARTICLE 715.12 OF THE SPECIFICATIONS.

BACKFILLED WITH AVAILABLE
COMMON EXCAVATION WHICH WAS
EQUIVALENT TO "B" BORROW.



CROSS SECTION
UNSUITABLE MATERIAL

SUMMARY

ITEM	QUANTITY	PAGE

COMPUTED BY J.D.

CKD

RB

FORM 1. C.—627
Rev. 2-62
10M 8-80

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

PAGE NO

67

I PROJ. NO. 100 SECTION 1070 BTR. NO. _____ CONTRACT NO. I-0000
ITEM E.W.A. SEPTEMBER 10, 1969 - GUARD RAIL Typ G No. 67
OVERRUNS 480 AT 15.00 7200.00 UNDERRUNS _____ AT \$ _____

OVERRUNS 480 AT \$ 15.00 \$ 7200.00 UNDERRUNS _____ AT \$ _____ \$ _____

[illegible]

COMPUTED BY JD

CHECKED *RP*

State Form 23088

INDIANAPOLIS, INDIANA

Cont. No. I-xxxx

Proj. No. I-100-1110

Str. No.

EXTRA WORK AGREEMENT

THIS ARTICLE OF AGREEMENT, made and entered into by and between the State of Indiana by: JOHN

May

or ~~Chief Engineer~~
Executive Director of the State Highway Commission, for and on behalf of the State of

Indiana, as party of the first part, hereinafter called the State and GENERAL CONSTRUCTION
COMPANY as party of the second part, hereinafter called the Contractor:

Whereas, it has been found necessary to perform certain work, not included in original contract and proposal, as executed under date of 2 JANUARY, 1969, for the construction of Contract No. I-0000
Project No. I-100, Sec. 1100, Str. 0+00, between station 0+00 and

Station 52480, whereas, this extra work is described as follows: CONSTRUCTING
TYPE "G" GUARD RAIL AS DETAILED ON STANDARD SHEETS
GR4, GR5 AND GR6, AS THEY ARE REVISED TO
1 JANUARY, 1969.

Whereas, the Standard Specifications for this contract provides for such work to be performed by agreement between the State and the Contractor.

WITNESSETH, That for and in consideration of matters hereinafter mentioned, the State does hereby hire and employ said contractor to furnish all materials, (except as otherwise expressly provided) and labor necessary and to fully construct as directed by the Department or its authorized representative, the above described work which shall be performed in accordance with the plans, specifications and special provisions under which the contract was awarded, and such supplemental plans and specifications which may accompany this agreement.

The State hereby promises and agrees to pay said contractor therefor, for the actual amount of accepted Extra Work performed, at the following unit prices or lump sums, which prices shall be full compensation for all materials (except as otherwise expressly provided), equipment, tools, labor and incidentals necessary to fully complete the respective items.

QUANTITY	DESCRIPTION OF ITEM	UNIT PRICE	AMOUNT
480	GUARD RAIL, TYPE "G"	15.00	\$ 7200.00
TOTAL			\$ 7200.00

(See other side for signatures and acknowledgments.)

(Insert filler page before folding on this line to prevent disfiguration of carbon lines on back of form)

FORM I. C.—627
Rev. 2-62
10M 8-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

PAGE No.

68

I PROJ. NO. 100 SECTION 1(1)0 BTR. NO. CONTRACT No. I-0000

ITEM E.W.A., SEPT 11, 1969 - BIT. MAIL FOR TACK COAT No. 68

OVERRUNS 1.20 AT 50.00 60.00 UNDERRUNS _____ AT _____

[illegible]

COMPUTED BY JD

CHECKED *KG*

From 1 C. 115
5M 8-80

State Form 2308B

INDIANA STATE HIGHWAY COMMISSION

INDIANAPOLIS, INDIANA

Cont. No. I-0000

Proj. No. T-100-1110

Str. No. _____

EXTRA WORK AGREEMENT

THIS ARTICLE OF AGREEMENT, made and entered into by and between the State of Indiana by...
C. E. HUNTING of ^{Division of Construction}~~Chief Engineer~~ of the State Highway Commission, for and on behalf of the State of
 Indiana, as party of the first part, hereinafter called the State and: GENERAL CONSTRUCTION
COMPANY as party of the second part, hereinafter called the Contractor:

Whereas, it has been found necessary to perform certain work, not included in original contract and proposal, as executed under date of 2 JANUARY, 1969 for the construction of Contract No. I-0000 Project No. I-100, Sec. 100, Str. 0 + 00, between station 0 + 00 and station 52 + 20, whereas, this extra work is described as follows: FURNISHING AND APPLYING BITUMINOUS MATERIAL FOR TACK COAT IN COMPLIANCE WITH SECTION 409 OF THE SPECIFICATIONS

Whereas, the Standard Specifications for this contract provides for such work to be performed by agreement between the State and the Contractor,

WITNESSETH, That for and in consideration of matters hereinafter mentioned, the State does hereby hire and employ said contractor to furnish all materials, (except as otherwise expressly provided) and labor necessary and to fully construct as directed by the Department or its authorized representative, the above described work which shall be performed in accordance with the plans, specifications and special provisions under which the contract was awarded, and such supplemental plans and specifications which may accompany this Agreement.

The State hereby promises and agrees to pay said contractor therefor, for the actual amount of accepted Extra Work performed, at the following unit prices or lump sums, which prices shall be full compensation for all materials (except as otherwise expressly provided), equipment, tools, labor and incidentals necessary to fully complete the respective items.

QUANTITY	DESCRIPTION OF ITEM	UNIT PRICE	AMOUNT
2 TENS	BITUMINOUS MATERIAL FOR TACK COAT	\$ 50.00	\$ 100.00
TOTAL			\$ 100.00

(See other side for signatures and acknowledgments.)

(Insert filler page before folding on this line to prevent disfiguration of carbon lines on back of form)

INDIANA STATE HIGHWAY COMMISSION
RECOMMENDED CHANGE IN PLANS, MATERIALS OR QUANTITIES

The following change is recommended. (Give location, description and reason) THE TABULATION OF REINFORCING STEEL ON SHEET 10 OF THE PLANS SHOWS 10-601 BARS @ 10'0" LONG. FORTY (40) OF THESE BARS ARE REQUIRED TO CONSTRUCT AS DETAILED. ADD'D STEEL: $20 \times 10 \times 1.502 = 300 \text{ lb.}$

P. 48-

Investigated and the following recommendations made: APPROVAL

By John Jones Title D.C.E. Date 5 MAY 69
 Recommended for Approval Paul Jones District Engineer Date 5 MAY 69
 Authorized Stokely Steele Title Chief, Div. of Construction Date 5 MAY 69

Form I.C. 626
Rev. 5-27-68
SM 3-79

State Form 35929

INDIANA STATE HIGHWAY COMMISSION
RECOMMENDED CHANGE IN PLANS, MATERIALS OR QUANTITIES

I Proj. 100 Sec. 1100 Contract No. I-0000

The following change is recommended. (Give location, description and reason) THIS ADJUSTS

"B" BORROW FOR STRUCTURAL BACKFILL QUANTITIES.

STR. #11, GRANULAR COMMON EXCAVATION AVAILABLE -7cy

STR. #14, ERROR IN PLAN QUANTITY, SEE SHEET 2 OF 3 +30cy

NET CHANGE REGULAR PORTION +23cy

F.R. #1 PORTION, STR. #16, SEE SHEET 3 OF 3. -16cy

CONTRACT ITEM	UNIT PRICE	INCREASE		DECREASE		% OF CHANGE
		QUANT.	AMT.	QUANT.	AMT.	
REGULAR PORTION OF CONTRACT						
6. "B" BORROW FOR STRUCTURAL BACKFILL	4.00	23	92.00			+3 P.6
F.R. #1						
6. "B" BORROW FOR STRUCTURAL BACKFILL	4.00			16	64.00	-2 P.6
TOTALS			92.00		64.00	
THIS CHANGE DOES NOT RESULT IN A CUMULATIVE CHANGE OF 20% TO ANY ITEM CONSTITUTING 5% OF THE ORIGINAL CONTRACT		NET	INCREASE	DECREASE	ESTIMATED COST	
					28.00	

Signed John W. Doe Title PROJECT ENGINEER Date 10 MAY 1969

Notification and consent to this change in plans is hereby acknowledged.

Contractor GENERAL CONSTR. CO. By A. B. Doe Date 5/10/69

Investigated and the following recommendations made: APPROVAL

By John Jones Title D.C.E. Date 13 MAY 69
Recommended for Approval Paul Jones District Engineer Date 13 MAY 69
Authorized Robert S. Zell Title Chief, Div of Cons. Date 19 MAY 69

INDIANA STATE HIGHWAY COMMISSION
RECOMMENDED CHANGE IN PLANS, MATERIALS OR QUANTITIES

The following change is recommended. (Give location, description and reason) SUBWAY TO BE
ELIMINATED IN CUT, STA. 3+90 TO 5+05, WHERE "B" BORROW
MATERIAL WAS ENCOUNTERED, SAVING 132 cyd.

ADDED THICKNESS RECOMMENDED, AS SKETCHED ON FEB. 10-3,
DUE TO A WET SLOW DRAINING MATERIAL ENCOUNTERED, ADD
432 CUP.

p. 12

Notification and consent to this change in plans is hereby acknowledged.

Investigated and the following recommendations made: APPROVAL

By John Jones Title D.C.E. Date 18 July 69
 Recommended for Approval Paul Jones District Engineer Date 18 July 69
 Authorized _____
 Not Authorized Robert Ball Title Chief, Div of Comm Date 22 July 69

72

Form I.C. 626
Rev. 5-27-68

State Form 36929

INDIANA STATE HIGHWAY COMMISSION
RECOMMENDED CHANGE IN PLANS, MATERIALS OR QUANTITIES

5M 3-79

I Proj. 100 Sec. 1110 Contract No. I-0000

The following change is recommended. (Give location, description and reason) TYPE "D" GUARD RAIL PLANNED AT THE FOUR CORNERS OF THE BRIDGE AT STATION 25+00 IS ELIMINATED. THIS RAIL IS TO BE CHANGED TO TYPE "E" GUARD RAIL AND CONNECTED TO THE BRIDGE RAILING; SEE EXTRA WORK AGREEMENT ON P. 67-1.

CONTRACT ITEM	UNIT PRICE	INCREASE		DECREASE		% OF CHANGE
		QUANT.	AMT.	QUANT.	AMT.	
35. GUARD RAIL, TYPE "D"	10.00			480.0	4800.00	-100
THIS CHANGE DOES NOT RESULT IN A CUMULATIVE CHANGE OF 20% TO ANY ITEM CONSTITUTING 5% OF THE ORIGINAL CONTRACT		TOTALS			4800.00	
NET		DECREASED		ESTIMATED COST \$		4800.00

Signed John Jones Title PROJECT ENGINEER Date 15 SEPT, 1969

Notification and consent to this change in plans is hereby acknowledged.

Contractor GENERAL CONSTR. CO. By P. B. Ace Date 9/15/69Investigated and the following recommendations made: APPROVAL

By John Jones Title D.C.E. Date 9-17-69
 Recommended for Approval Paul Jones District Engineer Date 9-17-69
 Authorized Robert Seale Title Chet, Div. of Cons. Date 9-22-69

INDIANA STATE HIGHWAY COMMISSION
RECOMMENDED CHANGE IN PLANS, MATERIALS OR QUANTITIES

The following change is recommended. (Give location, description and reason) ADD A 15'x5'
SIGN AT STATION 40+00 PI. THIS SIGN IS TO SHOW THE
DISTANCE TO TUSCALOOSA. IT WILL HAVE A TYPE "A" FACE,
12 W/36 SUPPORTS WITH STANDARD 30" DIAMETER BY 8 FT
DEEP FOUNDATIONS.

To
P. 561

Investigated and the following recommendations made: APPROVAL

By John Jones Title DCE Date 10-22-69
 Recommended for Approval Paul Jones District Engineer Date 10-22-69
 Authorized Robert Reed Title Chief, Div of Const. Date 10-27-69
 Not Authorized _____

COMPARISON OF ESTIMATES

These forms compare the original quantities estimated to the final quantities that are to be paid for. One set of forms should be made for the entire contract on all jobs. On "B" and "R" Contracts, a separate set is to be prepared for each project, bridge, or access road for which a separate estimate is contained in the proposal.

Sample IC 642 Breakdown

	Funding				
Contract R-oooo	90-10	70-30	100% Staff	Structure	Project
Project 1 Str 1	642	642	642	642	642
Project 2 Str 1	642	642	642	642	642
Str 2	642	642	642	642	

One additional IC 642 is necessary with a grant total for the complete contract. Include an item description in addition to the EWA date for all EWA items.

INDIANA STATE HIGHWAY COMMISSION

Site Form 3852

REVISED
5/4/80

CONSTRUCTION RECORD

COMPARISON OF ESTIMATES—ORIGINAL AND FINAL

TOTAL CONTRACT

CONTR. NO. I-0000

PROJ. NO. I-100-1(1)

STR. NO. 100-1-1111

CONTRACT ITEMS	UNIT PRICE	ORIGINAL ESTIMATE		FINAL ESTIMATE		OVERRUNS		UNDERRUNS	
		QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT
1. Common Excavation	0.70	102,057	71,439.90	101,111	71,477.70	54	37.80		
2. Borrow	0.80	101,344	81,075.20	100,759	80,607.20			585	468.00
3. Peat Excavation	0.60	15,397	9,238.20	20,243	12,145.80	4846	2907.60		
4. Cased Test Holes - 4"	0.50	500	250.00	470	235.00			30	15.00
5. "B" Borrow	3.00	17,791	53,373.00	0	0.00			17,791	53,373.00
6. "B" Borrow for Structure Backfill	4.00	781	3,124.00	788	3,152.00	7	28.00		
7. Pavement Removal	1.20	6,933	8,319.60	6,933	8,319.60	0	0	0	
8. Pavement Breaking	1.00	1,133	1,133.00	1,135	1,135.00	2	2.00		
9. Combined Curb & Gutter Removal	1.00	1,940	1,940.00	1,938	1,938.00			2	2.00
10. Subbase	4.00	5,000	20,000.00	5,300	21,200.00	300	1,200.00		
11. Type "P" Compacted Aggregate Base	5.00	8,550	42,800.00	8,411	42,055.00			149	745.00
12. Bituminous Surface	10.00	575.0	5,750.00	585.3	5,853.00	10.3	103.00		
13. Bituminous Base	9.00	2130.0	19,170.00	2191.1	19,719.90	61.1	549.90		
14. Bit. Mixture for Shoulders	9.00	1911.0	17,199.00	1891.2	17,020.80			19.8	178.20
15. Bit. Mat'l for Prime coat	50.00	32.00	1,600.00	29.60	1,480.00			2.40	120.00
16. Bituminous Base Material	11.00	733.0	8,063.00	713.0	7,843.00			20.0	220.00
17. Reinforced Concrete Pavement	7.00	3,250	22,750.00	2,995	20,972.00			254	1,778.00
18. Reinforced Steel for Pavement	0.15	4,867	730.05	4,913	735.95	46	6.90		
19. Contraction Joints	1.50	600	900.00	671	1,006.50	71	106.50		

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INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

State Form 3952

 Form 15-4-42
 SM 8-80
 8 1/2" x 11"

 COMPARISON OF ESTIMATES—ORIGINAL AND FINAL
 CONTR. NO. I-0000 PROJ. NO. I-100-1(1)0 STR. NO. 100-1-1111

TOTAL CONTRACT

CONTRACT ITEMS	UNIT PRICE	ORIGINAL ESTIMATE		FINAL ESTIMATE		OVERRUNS		UNDERRUNS	
		QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT
20. Pipe: Group "A" 18"	10.00	212	2,120.00	218	2,180.00	6	60.00		
21. Pipe: Group "B" 36"	13.50	182	2,457.00	182	2,457.00	0	0	0	0
22. Pipe: Group "B" 42"	14.75	100	1,475.00	100	1,475.00	0	0	0	0
23. Pipe: Group "C" 12"	4.85	24	116.40	24	116.40	0	0	0	0
24. 6" Pipe, Group "A"	0.80	5,260	4,208.00	4,955	3,964.00			305	244.00
25. 6" F.B.C. Non-Perf. C.S. Pipe	1.50	240	360.00	120	180.00			120	180.00
26. Culvert End Sections 12"	46.00	2	92.00	2	92.00	0	0	0	0
27. Culvert End Sections 18"	62.50	5	312.50	5	312.50	0	0	0	0
28. Aggregate for Subsurface Drains	5.00	400	2,000.00	578	2,890.00	178	890.00		
29. Concrete, Class "A" for Structures	100.00	21.2	2,120.00	18.7	1,870.00			2.5	250.00
30. Inlets, Type P-12	425.00	1	425.00	1	425.00	0	0	0	0
31. Riprap	10.00	230	2,300.00	381	3,810.00	151	1,510.00		
32. Paved Side Ditch, Type "A"	3.00	380	1,140.00	425	1,275.00	45	135.00		
33. Integral Concrete Curb	3.00	59	177.00	65	195.00	6	18.00		
34. Guard Rail, Type "3A"	7.00	330	2,310.00	333	2,331.00	3	21.00		
35. Guard Rail, Type "3"	10.00	480	4,800.00	0	0.00			480	4,800.00
36. Fence (F.F.T.)	0.60	10,560	6,336.00	10,384	6,212.40			206	123.60
37. Standard Barricades, Type "A"	350.00	2	700.00	2	700.00	0	0	0	0
38. Standard Barricades, Type "B"	275.00	4	1,100.00	4	1,100.00	0	0	0	0

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INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

State Form 3052

Rev. 10-15-61
SM 8-80

COMPARISON OF ESTIMATES—ORIGINAL AND FINAL

CONTR. NO. I-0000 PROJ. NO. I-100-1(1)0 STR. NO. 100-1-1111

TOTAL CONTRACT

CONTRACT ITEMS	UNIT PRICE	ORIGINAL ESTIMATE		FINAL ESTIMATE		OVERRUNS		UNDERRUNS	
		QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT
39. Construction Signs, Type "A"	100.00	16	1,600.00	13	1,300.00			3	300.00
40. Siding	0.90	2,900	2,610.00	3,509	3,158.10	609	548.10		
41. Furn. & Placing Agr. Limestone	10.00	13.0	130.00	11.6	116.00			1.4	14.00
42. Furn. & Placing Fertilizer	120.00	1.30	156.00	1.30	156.00	0	0	0	0
43. Furn & Placing Seed	1.25	715	893.75	715	893.75	0	0	0	0
44. Furn. & Placing Mulching Mat'l	100.00	13.00	1,300.00	13.4	1,340.00	0.4	40.00		
45. Class "A" Conc. in Superstructure	115.00	59.3	6,819.50	59.3	6,819.50	0	0	0	0
46. Concrete, Class "B" in Footings	90.00	95.1	8,559.00	95.1	8,559.00	0	0	0	0
47. Concrete, Class "B" above Footings	100.00	94.3	9,430.00	94.3	9,430.00	0	0	0	0
48. Reinforcing Steel	0.15	25,450	3,819.00	25,750	3,864.00	300	45.00		
49. Railing (Type 5 or C)	15.00	180	2,700.00	180	2,700.00	0	0	0	0
50. Furn. Equip. for Driving Piles	2000.00	1	2,000.00	1	2,000.00	0	0	0	0
51. Timber Piles Furnished, Treated	2.00	400	800.00	550	1,100.00	150	300.00		
52. Timber Piles Driven, Treated	1.50	400	600.00	537	805.50	137	205.50		
53. Steel "H" Piles Furn & Driven	10.00	210	2,100.00	207	2,070.00			3	30.00
54. Wet Excavation	10.00	103	1,030.00	34.9	349.00			73.1	731.00
55. Class "X" Excavation	20.00	3	60.00	10.6	212.00	7.6	152.00		
56. Type "A" Sign Face	8.50	60	510.00	135	1,161.00	75	645.00		
57. Sheet Piles (.030 min. thickness)	5.00	6.2	31.00	6.2	31.00	0	0	0	0

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INDIANA STATE HIGHWAY COMMISSION

CONSTRUCTION RECORD

COMPARISON OF ESTIMATES—ORIGINAL AND FINAL

I-100-1(111) STR. NO. 100-1-1111

ROAD

State Form 3532

SM 8-80

CONTR. NO. I-0000

PROJ. NO. I-100-1(111)

CONTRACT ITEMS	UNIT PRICE	ORIGINAL ESTIMATE		FINAL ESTIMATE		OVERRUNS		UNDERRUNS	
		QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT
1. Common Excavation	0.70	101,432	71,002.40	101,433	71,003.10	1	0.70		
2. Borrow	0.80	101,344	81,075.20	100,759	80,607.20			585	468.00
3. Peat Excavation	0.60	15,397	9,238.20	20,243	12,145.80	4846	2,907.60		
4. Cased Test Holes - 4"	0.50	500	250.00	470	235.00			30	15.00
5. "3" Borrow	3.00	17,791	53,373.00	0				17,791	53,373.00
6. "3" Borrow for Structure Backfill	4.00	764	3,056.00	787	3,148.00	23	92.00		
7. Pavement Removal	1.20	6,933	8,319.60	6,933	8,319.60	0		0	
8. Pavement Breaking	1.00	1,133	1,133.00	1,135	1,135.00	2	2.00		
9. Combined Curb & Gutter Removal	1.00	1,930	1,940.00	1,938	1,938.00			2	2.00
10. Subbase	4.00	5,000	20,000.00	5,300	21,200.00	300	1,200.00		
11. Type "P" Compacted Aggregate Base	5.00	7,900	39,500.00	7,751	38,755.00			149	745.00
12. Bituminous Surface	10.00	515.0	5,150.00	525.0	5,250.00	10.0	100.00		
13. Bituminous Base	9.00	1,930.0	17,820.00	2,040.6	18,365.40	60.6	545.40		
14. Bit. Mixture for Shoulders	9.00	1,911.0	17,199.00	1,891.2	17,020.80			19.8	178.20
15. Bit. Mat'l for Prime Coat	50.00	30.00	1,500.00	27.60	1,380.00			2.40	120.00
16. Bituminous Base Widening	11.00	733.0	8,063.00	713.0	7,843.00			20.0	220.00
17. Reinforced Concrete Pavement	7.00	3,250	22,750.00	2,995	20,972.00			254	1,778.00
18. Reinforced Steel for Pavement	0.15	4,857	730.05	4,913	736.95	46	6.90		
19. Contraction Joints	1.50	600	900.00	671	1,006.50	71	105.50		

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**INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD**

State Form 3952

Rev. 10-6-66
SI 8-80

COMPARISON OF ESTIMATES—ORIGINAL AND FINAL

CONTR. NO. I-0000 PROJ. NO. I-100-1(1)0 STR. NO. 100-1-1111 ROAD

CONTRACT ITEMS	UNIT PRICE	ORIGINAL ESTIMATE		FINAL ESTIMATE		OVERRUNS		UNDERRUNS	
		QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT
20. Pipe: Group "A" 18"	10.00	182	1,820.00	178	1,780.00			4	40.00
21. Pipe: Group "B" 36"	13.50	182	2,475.00	182	2,475.00	0		0	
22. Pipe: Group "B" 42"	14.75	100	1,475.00	100	1,475.00	0		0	
24. 6" Pipe: Group "K"	0.80	5,250	4,200.00	4,955	3,964.00			305	244.00
25. 6" F.B.C. Non-Perf. C.S. Pipe	1.50	240	360.00	120	180.00			120	180.00
27. Culvert End Sections 18"	62.50	4	250.00	4	250.00	0		0	
28. Aggregate for Subsurface Drains	5.00	400	2,000.00	578	2,890.00	178	890.00		
29. Concrete, Class "A" for Structures	100.00	21.2	2,120.00	18.7	1,870.00			2.5	250.00
32. Paved Side Ditch, Type "A"	3.00	250	750.00	315	945.00	55	165.00		
33. Interval Concrete Curb	3.00	59	177.00	65	195.00	6	18.00		
34. Guard Rail, Type "Ba"	7.00	330	2,310.00	333	2,331.00	3	21.00		
35. Guard Rail, Type "C"	10.00	480	4,800.00	0	0			480	4,800.00
36. Fence (P.F.T.)	0.60	10,450	6,336.00	10,354	6,212.40			296	123.60
37. Standard Barricades, Type "A"	350.00	2	700.00	2	700.00	0		0	
38. Standard Barricades, Type "B"	275.00	4	1,100.00	4	1,100.00	0		0	
39. Construction Signs, Type "A"	100.00	16	1,600.00	13	1,300.00			3	300.00
40. Gravel	0.90	2,700	2,430.00	2,707	2,436.30	7	6.30		
41. Furn. & Placing Arr. Limestone	10.00	12.0	120.00	10.9	109.00			1.1	11.00
42. Furn. & Placing Fertilizer	120.00	1.20	144.00	1.20	144.00	0		0	

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State Form 3952

PL 86-16 642
REV 4-12-61
SM 8-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

COMPARISON OF ESTIMATES—ORIGINAL AND FINAL

ROAD

I-0000

PROJ NO I-100-1(1)0

100-1-1111

[illegible]
$$\text{Net Overrun} = \$20,405.89 = 5.032\%$$

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RECORD OF CONSTRUCTION

Each contract should have either a Form IC. 654 prepared for each project or bridge in the contract.

Each form should show the name of the Project Engineer or Inspector who supervised the principal part of the work.

Under Source of Materials it is important that the mill, pit, or quarry can be located as well as the name of the producer shown.

Any new, experimental, or unusual feature of the contract should be shown. A separate sheet of plain paper can be added if necessary.

In the upper right portion of Form IC 654 the principal items in the contract are to be listed. Their costs per mile and costs per square yard are to be computed as they are applicable. On bridge widening contracts the unit prices only should be shown. This part of the form need not be completed for bridge painting or mowing contracts.

On mowing contracts, acreage instead of miles, should be shown.

On bridge painting contracts the source of the paint and number of costs should be shown on the bottom part of Form IC 654.

For bridges that are a part of an "R" contract, only the upper left part of the I.C. 654 needs to be filled out. This is also true of "B" contracts that are for "bare bridges". On bridge contracts with approach pavement the bottom portion of the form should be completed also.

In computing the cost per mile for grading, pavement, and structures, include the items that are grouped together in the itemized proposal. Do not include bridge items in the structure items.

Separate forms need not be made for Access Roads. These quantities should be included with other road quantities.

A "Major" item is any item that is in excess of 5% of the total contract, excluding lump sum items.

I.C. 654 State Form 22614
Rev. 5/72
Replaces I.C. 654A & M-269

INDIANA STATE HIGHWAY COMMISSION
RECORD OF CONSTRUCTION

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2M 10-80

PROJECT NO. I-100 SEC. 1(1)0 NET LENGTH AS AWARDED 1.000 MILES 12.743 SYD.
CONTRACT NO. I-0000 LENGTH ACTUALLY BUILT 1.000 MILES 12.743 SYD.
STR. NO. _____ COST PER MILE (ALL ITEMS) \$ 475,911.79
LOCATION N. Main St. in Miami form First COST PER MILE (PAVEMENT) \$ 139,432.19
Street North 1.00 Miles. COST PER MILE (GRADING) \$ 244,152.20
COUNTY Indian COST PER MILE (STRUCTURES) \$ 16,328.20
ROAD NO. 100 SEC. 1
AWARDED 2 January, 1969 CONTRACT (MAJOR ITEMS) UNIT PRICES COST PER MI. COST SYD.
COMPLETED 31 October, 1969 1 1. Common Excavation \$ 0.70 \$ 71,477.20 \$ 5.61
CONTRACTOR General Construction 2 2. Borrow \$ 0.00 \$ 80,607.20 \$ 6.32
Company 3 5. "B" Borrow \$ 2.99 \$ 55,707.40 \$ 5.16
BONDED BY Construction Insurance 4 10. Subbase \$ 4.00 \$ 21,200.00 \$ 1.65
Corporation 5 11. Type "P" Comp. Arg. Base \$ 5.00 \$ 42,055.00 \$ 3.30
SPECIFICATIONS: 1969 6 12. Bit. Surface \$ 10.00 \$ 5,853.00 \$ 0.45
PROJECT ENGR. John Doe 7 13. Bit. Base \$ 9.00 \$ 19,719.90 \$ 1.55
INSPECTOR Robert Doe 8 _____ \$ _____ \$ _____

AMOUNT OF CONTRACT \$ 453,433.50 TOTAL WORK DONE \$ 475,911.79 LIQUIDATED DAMAGES \$ 200.00

SOURCE OF MATERIALS (SPECIFIC LOCATIONS)

If material is from different sources show station numbers for each source:

MATERIAL	COMPANY	SOURCE	STA. TO STA.
#11 Stone	Hoosier Aggregate	Miami	Entire Job
#4 Stone	Hoosier Aggregate	Miami	Entire Job
#17 Sand	Hoosier Aggregate	Miami	Entire Job
AP 4	Standard Asphalt	Standard City	Entire Job
RC 70	Standard Asphalt	Standard City	Entire Job
MC 70	Standard Asphalt	Standard City	Entire Job

PAVEMENT DATA	Bituminous Pavement			Concrete Pavement
	FIRST	SECOND	THIRD	
TYPE OF COURSE	Aggregate	Bit. Base	Bit. Surface	A.C. Concrete
WIDTH	38'	24'-6"	24'	24'
AREA (SQS.)				
THICKNESS	6"	4"	1"	10"
SIZE AGGREGATE	#53	#4	#11	14-1 5L
IBS. PER SYD.				
BIT. MAT'L (GALS./LBS. & SYD.)				
GRADE AND PRIME	Mc 70			
KIND OF IN COURSE		AP 4	AP 4	
BIT. MAT'L SEAL				
EXPANSION SPACING	None	CONTRACTION	SPACING	40'
JOINTS TYPE		JOINTS	TYPE	D-1
WIDTH				
REINFORCEMENT				12 x 6 Mesh

SPECIAL REMARKS: _____

SUBMITTED BY: John Doe
PROJ. ENGR. SUPVR. OR INSPECTOR

APPROVED BY: Robert Doe
DISTRICT ENGINEER

12/3/69
DATE

I.C. 654 State Form 22614
Rev. 5/72
Replaces I.C. 654A & M-269

INDIANA STATE HIGHWAY COMMISSION
RECORD OF CONSTRUCTION

84

2M 10-80
PROJECT NO. I-100 SEC. 1(1)0 NET LENGTH AS AWARDED _____ MILES _____ SYD.
CONTRACT NO. I-0000 LENGTH ACTUALLY BUILT _____ MILES _____ SYD.
STR. NO. 100-1-1111 COST PER MILE (ALL ITEMS) \$ _____
LOCATION N. Main St. in Miami over Aquaw Creek, 0.5 mile North of Forest Street COST PER MILE (PAVEMENT) \$ _____
COUNTY Indian COST PER MILE (GRADING) \$ _____
ROAD NO. _____ SEC. _____ COST PER MILE (STRUCTURES) \$ _____
AWARDED 2 January, 1969 CONTRACT (MAJOR ITEMS) UNIT PRICES COST PER MI. COST SYD.
COMPLETED 31 October, 1969 1 _____ \$ _____ \$ _____ \$ _____
CONTRACTOR General Construction Company 2 _____ \$ _____ \$ _____ \$ _____
3 _____ \$ _____ \$ _____ \$ _____
BONDED BY Construction Insurance Corporation 4 _____ \$ _____ \$ _____ \$ _____
5 _____ \$ _____ \$ _____ \$ _____
SPECIFICATIONS: 1969 6 _____ \$ _____ \$ _____ \$ _____
PROJECT ENGR. John Doe 7 _____ \$ _____ \$ _____ \$ _____
INSPECTOR Robert Doe 8 _____ \$ _____ \$ _____ \$ _____

AMOUNT OF TOTAL WORK LIQUIDATED
CONTRACT \$ 40,267.50 DONE \$ 41,719.00 DAMAGES \$ None

SOURCE OF MATERIALS (SPECIFIC LOCATIONS)

If material is from different sources show station numbers for each source:

MATERIAL	COMPANY	SOURCE	STA. TO STA.

PAVEMENT DATA	FIRST	SECOND	THIRD	FOURTH	
TYPE OF COURSE					
WIDTH					
AREA (SYS.)					
THICKNESS					
SIZE AGGREGATE					
LBS. PER SYD.					
BLT. MAT'L (GALS./LBS. & SYD.)					
GRADE AND PRIME					
KIND OF IN COURSE					
BLT. MAT'L SEAL					
EXPANSION SPACING		CONTRACTION	SPACING		
JOINTS TYPE		JOINTS	TYPE		
WIDTH					
REINFORCEMENT					

SPECIAL REMARKS: _____

SUBMITTED BY: John Doe
PROJ. ENGR. SUPVR. OR INSPECTOR

APPROVED BY: Paul Fox
DISTRICT ENGINEER

12/3/69
DATE

RECORD OF COMPLETION AND ACCEPTANCE

This form summarizes a number of pertinent dates for the contract. One copy is to be prepared for each contract.

The line for the date that the surface was completed applied to main line surface of either bituminous or concrete surfaces.

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Form I.C. 635
REV. 1957

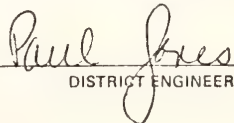
1M 10-77

STATE HIGHWAY DEPARTMENT OF INDIANA

DISTRICT ENGINEER'S REPORT OF FINAL INSPECTIONS

CONTRACT I-0000PROJECT NO. I-100-1(1)0ROADS AND MAINTENANCE SECTIONS 100 -51LENGTH-MILES 1.000DATE LAST PAVEMENT WAS LAID 30 September 19 69DATE ENTIRE PROJECT OPENED TO TRAFFIC 31 October 19 69VARIATIONS IN PAVEMENT SURFACE REMOVED 30 September 19 69JOINTS AND CRACKS SEALED 30 July 19 69DATE LAST WORK PERFORMED 31 October 19 69WORK INSPECTED AND FOUND SATISFACTORY BY Bruce Doeon 31 October 19 69CENTRAL OFFICE LETTER OF ACCEPTANCE DATED 5 November 19 69*DATE CEMENT CONCRETE PATCHING COMPLETED 19*DATE CONCRETE WIDENING COMPLETED 1 August 19 69*DATE JOINTS SEALED 30 July 19 69*DATE BITUMINOUS UNDERSEAL COMPLETED 19*DATE BINDER COMPLETED 16 September 19 69*DATE BITUMINOUS SEAL COMPLETED 19*DATE BITUMINOUS SURFACE COMPLETED 30 September 19 69

*DATE 30-DAY MAINTENANCE REQUIRED ON ROCK ASPHALT SURFACE

EXPIRED 19


DISTRICT ENGINEER

Items indicated by * only when applicable to the Contract

LIQUIDATED DAMAGES

This form provides a place for systematic computation of liquidated damages, if any apply to a contract. Only one form is necessary for each contract.

This form provides space for computing contract completion data for "Work Day," "Calendar Date," and contracts with "Intermediate Completion Time." The line labeled "Additional Days/Time/Date Approved" is to be used in cases where time for added work is approved and the value of this work is greater than the proportion to the dollar value of the original contract. This can only be approved by letter from the Chief Highway Engineer, and it must have the concurrence of the Federal Highway Administration on participating contracts. (Except Secondary Projects)

The percent of overrun is that percent shown at the bottom of the last IC 642 sheet for the entire contract. Note that the percent overrun does not apply to the "Intermediate Completion Time" unless specifically provided for in the Special Provisions.

The amount of liquidated damages to be charged per day for Work Day, Calendar Day, and Fixed Date Contracts is shown in Article 108.07 of the Standard Specifications. The amount of liquidated damages to be charged per day on Intermediate Completion Time contracts is provided for in the Special Provisions.

When computing extensions on Calendar Date Contracts, additional days may be entered on the "Delay in Issuing the Notice to Proceed" line only when you receive written authority from the Contracts Engineer. Section 108.06 of the Specifications states that an extension to the contract completion date will be allowed if the Notice to Proceed is not issued within 20 days of the Letting and the delay is not due to the failure of the contractor to provide requested forms or information. On the "Contract Overrun" line, it is noted that the number of days to be used in computing the number of overrun days, is the number of days starting with the day after the Letting, to and including the original completion date.

Occasionally, we have contracts that are to be completed within a specified number of CALENDAR DAYS. Computations should be made in the space provided for "Calendar Date Contracts," except that the line "Delay in Issuing Notice to Proceed" will not apply on Calendar Day contracts.

The Intermediate Completion Time is always in combination with one of the other types of completion dates. Care must be taken not to confuse the computation of each type.

When the District receives written authority to extend or revise the completion time on a contract, and this extension or revision does not follow the standard formulas set out on Form IC 632, then appropriate references must be entered on the IC 632, so that any reviewing personnel may easily follow the new calculations.

Explanation Sheet for I.C. 632
(Continued)

If liquidated damages are to be assessed for one or more types of completion dates, entries are to be made on the appropriate line under "Liquidated Damages To Be Assessed" and a grand total of all damages is then transferred to the progress or final estimate as a lump sum figure.

Appropriate examples of this form follow this explanation sheet.

I.C. 632 2M 9 80
Rev. 5/75

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COMPLETION DATE & LIQUIDATED DAMAGES DATA

I-100-1100 I-0000
Project Number Structure Number Contract Number

Letting Date DEC. 17, 1968 Date of First Work JAN. 20, 1969
Award Date JAN. 2, 1969 Date of Last Work OCT. 31, 1969
Notice To Proceed Date JAN. 3, 1969 Contractor GENERAL CONSTRUCTION CO.

FOR WORK DAY CONTRACTS:

Work Days Allowed 100 days
Contract Overrun (4.9%) X 100 (No. of Work Days) 5 days
Additional Days Approved 0 days
Total Work Days Allowed 105 days
Number of Work Days Used 110 days
Number of Work Days Over 5 days

FOR CALENDAR DATE CONTRACTS:

Contract Completion Date _____
Delay in issuing Notice To Proceed _____ days
Contract Overrun (_____%) X _____ days
Number of days starting with the day after the Letting, to and including the Original Completion Date
Additional Time or Date Approved _____
Adjusted Calendar Completion Date _____
Actual Calendar Completion Date _____
Number of Calendar Days Over _____ days

FOR IMMEDIATE COMPLETION TIME: (Open to traffic, road closure, traffic restriction)

Original Intermediate Completion Time (from Special Provisions) _____ days/date
Contract Overrun (_____%) X _____ (See Special Provisions) _____ days
Additional Time or Date Approved _____ days/date
Adjusted Intermediate Completion Time _____ days/date
First day of Closure or Restriction _____
Last day of Closure or Restriction (Open to Traffic) _____
Number of days used _____
Number of days over _____

LIQUIDATED DAMAGES TO BE ASSESSED:

Work Day Contracts: 5 days @ \$ 140 /day = \$ 700.00
Calendar Date Contracts: _____ days @ \$ _____ /day = \$ _____
Intermediate Completion Time: _____ days @ \$ _____ /day = \$ _____
TOTAL \$ 700.00

Date Review Completed: December 31, 1969
District Review by: HARRY MANA

Paul Jones
DISTRICT ENGINEER

FOR CENTRAL OFFICE ONLY

Date Review Completed: _____
Reviewed by: _____

ENGINEER OF OFFICE ADMINISTRATION

I.C. 632 2M 9-80
Rev. 5/75

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COMPLETION DATE & LIQUIDATED DAMAGES DATA

I-100-1(1)0 I-0000
Project Number Structure Number Contract Number

Letting Date Dec 17, 1968 Date of First Work JAN 20, 1969
Award Date JAN 2, 1969 Date of Last Work OCT 31, 1969
Notice To Proceed Date JAN 3, 1969 Contractor GENERAL CONSTRUCTION CO.

FOR WORK DAY CONTRACTS:

Work Days Allowed _____ days
Contract Overrun (_____ %) X _____ (No. of Work Days) _____ days
Additional Days Approved _____ days
Total Work Days Allowed _____ days
Number of Work Days Used _____ days
Number of Work Days Over _____ days

FOR CALENDAR DATE CONTRACTS:

Contract Completion Date OCT 10, 1969
Delay in issuing Notice To Proceed _____ days
Contract Overrun (4.96 %) X 281 14 days
Number of days starting with the day after the Letting, to and including the Original Completion Date
Additional Time or Date Approved NONE
Adjusted Calendar Completion Date OCT 24, 1969
Actual Calendar Completion Date OCT 31, 1969
Number of Calendar Days Over 7 days

FOR IMMEDIATE COMPLETION TIME: (Open to traffic, road closure, traffic restriction)

Original Intermediate Completion Time (from Special Provisions) _____ days/date
Contract Overrun (_____ %) X _____ (See Special Provisions) _____ days
Additional Time or Date Approved _____ days/date
Adjusted Intermediate Completion Time _____ days/date
First day of Closure or Restriction _____
Last day of Closure or Restriction (Open to Traffic) _____
Number of days used _____
Number of days over _____

LIQUIDATED DAMAGES TO BE ASSESSED:

Work Day Contracts: _____ days @ \$ _____ /day = \$ _____
Calendar Date Contracts: 7 days @ \$ 100.00 /day = \$ 700.00
Intermediate Completion Time: _____ days @ \$ _____ /day = \$ _____
TOTAL \$ 700.00

Date Review Completed: Dec 31, 1969District Review by: HARRY MANN

Paul Jones
DISTRICT ENGINEER

FOR CENTRAL OFFICE ONLY

Date Review Completed: _____

Reviewed by: _____

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Rev. 5/75

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COMPLETION DATE & LIQUIDATED DAMAGES DATA

I-100-1(100) I-0000
Project Number Structure Number Contract Number

Letting Date Dec 17, 1968 Date of First Work JAN 20, 1969
Award Date JAN 2, 1969 Date of Last Work OCT 31, 1969
Notice To Proceed Date JAN 3, 1969 Contractor GENERAL CONSTRUCTION CO.

FOR WORK DAY CONTRACTS:

Work Days Allowed _____ days
Contract Overrun (_____ %) X _____ (No. of Work Days) _____ days
Additional Days Approved _____ days
Total Work Days Allowed _____ days
Number of Work Days Used _____ days
Number of Work Days Over _____ days

FOR CALENDAR DATE CONTRACTS:

Contract Completion Date OCT 10, 1969
Delay in issuing Notice To Proceed 0 days
Contract Overrun (4.96 %) X 281 14 days
Number of days starting with the day after the Letting, to and including the Original Completion Date
Additional Time or Date Approved NONE
Adjusted Calendar Completion Date OCT 29, 1969
Actual Calendar Completion Date OCT 31, 1969
Number of Calendar Days Over 7 days

FOR IMMEDIATE COMPLETION TIME: (Open to traffic, road closure, traffic restriction)

Original Intermediate Completion Time (from Special Provisions) 90 days/date
Contract Overrun (_____ %) X (See Special Provisions) D.N.A. days
Additional Time or Date Approved _____ days/date
Adjusted Intermediate Completion Time 0 days/date
First day of ~~Closure~~ or Restriction JULY 7, 1969
Last day of ~~Closure~~ or Restriction (Open to Traffic) OCT. 8, 1969
Number of days used 94
Number of days over 4

LIQUIDATED DAMAGES TO BE ASSESSED:

Work Day Contracts: _____ days @ \$ _____ /day = \$ _____
Calendar Date Contracts: 7 days @ \$ 100.00 /day = \$ 700.00
Intermediate Completion Time: 4 days @ \$ 500.00 /day = \$ 2,000.00
TOTAL \$ 2,700.00

Date Review Completed Dec 31, 1969
District Review by: HARRY MANN

Paul Jones
DISTRICT ENGINEER

FOR CENTRAL OFFICE ONLY

Date Review Completed: _____
Reviewed by: _____

ENGINEER OF OFFICE ADMINISTRATION

89

Form M-39 2M 1-80
 Nov. 1946
 3M 6-77

Contract No. I-0000

Date 31 Dec. 1969

CONTRACTOR'S INSPECTION OF FINAL CONSTRUCTION RECORD REPORT

Paul Jones
 District Engineer
 P. O. Box 100
 Indian Creek, Indiana

No. I-0000 Having checked the Final Construction Record on Contract
 I hereby agree that the quantities are acceptable.

Total Work Done is	\$475,911.79
Less Liquidated Damages	<u>700.00</u>
Net	\$475,211.79

Having reviewed the charges for failure to complete the contract by the completion date I hereby agree that the charges are acceptable.

5 days @ \$140 = \$700 (Working Day Completion)

or

7 days @ \$100 = \$700 (Calendar Day Completion)

Signed Roger Jaoust

Title President

Company General Construction Co.

- 1 - Construction Record
- 1 - Contractor
- 1 - District File

PROPERTY RELEASE

The General Instruction for Field Employees states that this form must be secured from all property owners where debris, such as stumps, is wasted. Releases are also required from owner's of Borrow Pits, plant sites, haul roads, or where for any other reason the Contractor has worked outside the permanent or temporary right-of-way in connection with the project.

Property releases protect the Contractor as well as the State. In any case where a property owner refuses to sign a release without further work or compensation from the Contractor, two careful checks should be made by the Project Engineer. The first check should be that our Specifications and plans have been complied with and the second check should be to determine if any agreement, written or implied, with the land owner, has been satisfied. If it is found that both of these contracts have been fulfilled, with the owner still refusing to sign a release, the unsigned release should be placed in the record with the Project Engineer's statement that the property in question was left in satisfactory condition. Either the Area or District Construction Engineer must also sign the Project Engineer's explanation waiving the release.

90

Form I.C. 149
Rev. 1962

2M 3-80

INDIANA STATE HIGHWAY COMMISSION

PROPERTY RELEASE FROM LANDOWNER FOR DISPOSAL OF TREES, STUMPS, CONCRETE,
OR OTHER UNSUITABLE MATERIAL AND/OR BORROW PIT RELEASE.

CONTRACT NO. I-0000 Miami, Indiana
PROJECT NO. I-100-1(1)0 31 October, 1969
STRUCTURE NO. _____

~~XXXX~~ (or I), the undersigned, ~~owner~~ (or owner) of land along
State Highway No. 100, from Station 9+90 to Station 26+40,
adjacent to the above noted contract, constructed by General
Construction Co. hereby state that my property has been left in a
satisfactory condition and I release the Contractor from any claim for
use or damage to said property.

(Signed)

Sam Jones
Owner, Sam Jones

Copies to:

Project Engineer
District Engineer
Property Owner
Contractor

Note: The Project Engineer's copy to be incorporated in the Construction
Record.

Final payment to a contractor will be made within 180 days after acceptance of the project. Acceptance is considered as the date the contractor is relieved of further maintenance as set out in the final acceptance letter.

If the final payment is not made within 180 days of final acceptance, the contractor will be paid interest at a rate by the state legislature on the unpaid balance.

The 1C 728 is a list of pertinent dates for the computation of interest due the contractor, if any. This form should be completed by the District and enclosed at the back of the Final Construction Record and sent to the central office.

Any explanation of dates that is necessary can be put in the Remarks sections.

CONTROLLING DATES IN FINAL ESTIMATE PREPARATION FOR COMPUTING INTEREST DUE THE CONTRACTOR

91

I.C. 728

5M 11-74

PROJECT NO.	<u>I-100-1(1)0</u>	STRUCTURE NO.	<u>100-1-1111</u>	CONTRACT NO.	<u>I-0000</u>
DATE OF ACCEPTANCE.....	<u>5 November</u>			19	<u>69</u>
PRELIMINARY QUANTITIES TO DISTRICT.....	<u>15 November</u>			19	<u>69</u>
CONSTRUCTION RECORD TO DISTRICT	<u>5 December</u>			19	<u>69</u>
FINAL QUANTITIES TO LABORATORY	<u>9 December</u>			19	<u>69</u>
DISTRICT MATERIAL CERTIFICATE TO LABORATORY	<u>16 December</u>			19	<u>69</u>
MATERIAL CERTIFICATE RECEIVED.....	<u>28 December</u>			19	<u>69</u>
*RECORD READY FOR CENTRAL OFFICE (NOT INCLUDING M-39)	<u>4 January</u>			19	<u>70</u>
M-39 SENT TO CONTRACTOR.....	<u>31 December</u>			19	<u>69</u>
M-39 RECEIVED FROM CONTRACTOR	<u>5 January</u>			19	<u>70</u>
CONTRACTOR CONTROLLED TIME LOSS					DAYS
RAILROAD INDEBTEDNESS CLEARANCE RECEIVED	<u>DNA</u>			19	
INCREASED TIME LOSS					DAYS
DATE OF CONCRETE CORE REPORT.....	<u>14 January</u>			19	<u>70</u>
DATE REPLACEMENT COMPLETED (IF ANY).....				19	
INCREASED TIME LOSS					DAYS
DELINQUENT RECORDS (IF ANY) RECEIVED.....				19	
INCREASED TIME LOSS.....					DAYS
TOTAL CONTRACTOR CONTROLLED					
TIME LOSS					DAYS
CONSTRUCTION RECORD TO CENTRAL OFFICE	<u>1 February</u>			19	<u>70</u>

Remarks: _____

*NOTE:

NORMALLY NO CONTRACTOR CONTROLLED TIME LOSS SHALL BE CHARGED PRIOR TO THIS DATE.

DOCUMENTATION OF ALTERNATE BID ITEMS

When alternate bid items are used in lieu of regular bid items, a Change In Plans, Form I.C. 626 must be prepared. The I.C. 626 should show the deletion of the regular bid item and the addition of the respective alternate item. The letter "A" should be placed after the item number of each alternate item being added. See Sample "A".

The Progress Estimate, Form DAC-25, should also reflect the alternate bid item as an entirely new entry. The line item number of the alternate bid and the regular bid item should be the same number; however, an "A" should be placed behind that of the alternate bid. Note that the quantity of the regular bid item should equal zero (0) when alternate items are used. See Sample "B".

When preparing the Final Construction Record, Form I.C. 627 should show the regular as well as the alternate bid quantity. A note signed by the Project Engineer to the effect that Federal participation is limited only to the regular bid price should also appear on this Form. This will assist in assuring the proper release of funds for final billing. See Sample "C".

When the Comparison of Estimates, Form I.C. 642, is compiled, both the regular bid items and the alternate bid item should be listed on the "Total" sheet. If the contract is broken down into 90/10, 70/30, and 100% State funding, the breakdown must reflect both alternate and regular bid items. As illustrated on the attached Sample Sheets D, E, and F; the regular and alternate bid item will appear on the 90/10 breakdown at the regular bid price and the difference between the two, will appear on the 100% State breakdown.

The Comparison of Estimates, Form I.C. 642, showing the funding breakdown will be the only place where the alternate bid item will be broken down to reflect the actual cost of the participating and non-participating amounts.

92-1

Form I.C. 626
Rev. 5-27-68

SAMPLE A
INDIANA STATE HIGHWAY COMMISSION
RECOMMENDED CHANGE IN PLANS, MATERIALS OR QUANTITIES

3M 8-74

I-FI _____ Proj. 465-5 _____ Sec. _____ (193)106 _____ Contract No. _____

The following change is recommended. (Give location, description and reason) _____

*Federal participation limited only to the regularly bid price.

CONTRACT ITEM	UNIT PRICE	INCREASE		DECREASE		% OF CHANGE
		QUANT.	AMT.	QUANT.	AMT.	
#2. 400 Watt Roadway Luminaire	170.00			30	5,100.00	100
#4. 150 Watt Underpass Luminaire	300.00			15	4,500.00	100
#5. 250 Watt Sign Luminaire	140.00			90	12,600.00	100
* #2A. 400 Watt Roadway Luminaire	190.00	30	5,700.00			100
* #4A. 150 Watt Underpass Luminaire	350.00	15	5,250.00			100
* #5A. 250 Watt Sign Luminaire	150.00	90	13,500.00			100
THIS CHANGE DOES NOT RESULT IN A CUMULATIVE CHANGE OF 20% TO ANY ITEM CONSTITUTING 5% OF THE ORIGINAL CONTRACT.		TOTALS		24,450.00	22,200.00	
NET		INCREASED DECREASED		ESTIMATED COST \$ 2,250.00		

Signed _____ Title _____ Date _____

Notification and consent to this change in plans is hereby acknowledged.

Contractor _____ By _____ Date _____

Investigated and the following recommendations made: _____

By _____ Title _____ Date _____

Recommended for Approval _____ District Engineer _____ Date _____

Authorized Not Authorized _____ Title _____ Date 5-1-78

S A M P L E " B "

PAGE

WARRANT NO.

PURCHASE ORDER NO.

DATE OF P.O. _____

CURE YR. UN

CURR. YR. UNLIQ. BAL.

TOT. UNLIQ. BAL.

APPRO. ACCT. NO. (800)

APPRO. NAME

STATE SHARE

FEDERAL SHARE

TOTAL DISBURSEMENT

AMT. PAID

AMT. LIQ.

DEBIT BLACK

CREOLE - RED

• OVERRUN OF PROPOSAL QUANTITY

SAMPLE "C"

Form I. C. - 627A
REV. 3-62

92-3
2 & 2A
PAGE No. _____

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

I-FI	PROJECT No.	465-5	SECTION	(193)106	CONTRACT No.	RT-20000
2.	400 Watt Roadway Luminaire					
ITEM 2A.	400 Watt Roadway Luminaire (G.E. Style M-400)					
						No.

OVERRUNS _____ AT 6 _____ 6 _____ UNDERRUNS _____ AT 6 _____ 6 _____

[illegible]

COMPUTED BY

CHECKED

92-4

S A M P L E "D"

INDIANA STATE HIGHWAY COMMISSION

CONSTRUCTION RECORD

COMPARISON OF ESTIMATES — ORIGINAL AND FINAL

CONTRACT NO. RT-20000 PROJ. NO. 1-FI-465-5(193)106 STR. NO. 106 TOTAL CONTRACT

CONTRACT ITEMS	UNIT PRICE	ORIGINAL ESTIMATE		FINAL ESTIMATE		OVERRUNS		UNDERRUNS	
		QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT
1. Guard Rail Type D _s (Modified)	20.00	100	2,000.00	100	2,000.00				
2. Roadway Luminaire: 400 Watt High Pressure Sodium Luminaire	170.00	30	5,100.00	0	0.00			30	5,100.00
2A. Roadway Luminaire: 400 Watt High Pressure Sodium G.E. Style M-400	190.00	0	0.00	30	5,700.00	30	5,700.00		
3. Overhead Sign Removal	150.00	10	1,500.00	10	1,500.00				
4. Underpass Luminaire: 150 Watt High Pressure Sodium Luminaire For Pier	300.00	15	4,500.00	0	0.00			15	4,500.00
4A. Underpass Luminaire: 150 Watt High Pressure Sodium Luminaire For Pier	350.00	0	0.00	15	5,250.00	15	5,250.00		
Cap Mounting With Vandal Shield									
Cap Mounting With Vandal Shield									
G.E. Walllighter WL-250									
5. Sign Luminaire: 250 Watt Mercury Vapor Luminaire With Glare Shield	140.00	90	12,600.00	0	0.00			90	12,600.00
5A. Sign Luminaire: 250 Watt Mercury Vapor Luminaire With Glare Shield	150.00	0	0.00	90	13,500.00	90	13,500.00		
G.E. Walllighter WL-250									
6. Rectangular Posts	3.00	60	180.00	60	180.00				

PAGE

S A M P L E "E"

90/10 FUNDING

INDIANA STATE HIGHWAY COMMISSION

CONSTRUCTION RECORD

COMPARISON OF ESTIMATES — ORIGINAL AND FINAL

FORM IC 642
REV 4-15-61
2M 376CONTR. NO. RI-20000PROJ. NO. RI-465-5(193)106STR. NO.

CONTRACT ITEMS	UNIT PRICE	ORIGINAL ESTIMATE		FINAL ESTIMATE		OVERRUNS		UNDERRUNS	
		QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT
2. Roadway Luminaire: 400 Watt High Pressure Sodium Luminaire	170.00	30	5,100.00	0	0.00			30	5,100.00
2A. Roadway Luminaire: 400 Watt High Pressure Sodium G.E. Style M-400 The difference in unit prices between Item #2 & 2A is the Non-Participating amount & is listed on the 100% State funding sheet	170.00	0	0.00	30	5,100.00	30	5,100.00		
4. Underpass Luminaire: 150 Watt High Pressure Sodium Luminaire For Pier Cap Mounting With Vandal Shield	300.00	15	4,500.00	0	0.00			15	4,500.00
4A. Underpass Luminaire: 150 Watt High Pressure Sodium Luminaire For Pier Cap Mounting With Vandal Shield G.E. Walllighter WL-250 The difference in unit prices between Item #4 & 4A is the Non-Participating amount & is listed on the 100% State funding sheet	300.00	0	0.00	15	4,500.00	15	4,500.00		
5. Sign Luminaire: 250 Watt Mercury Vapor Luminaire With Glare Shield 5A. Sign Luminaire: 250 Watt Mercury Vapor Luminaire With Glare Shield G.E. Walllighter WL-250 The difference in unit prices between Item #5 & 5A is the Non-Participating amount & is listed on the 100% State funding sheet	140.00	90	12,600.00	0	0.00			90	12,600.00
	140.00	0	0.00	90	12,600.00	90	12,600.00		

PAGE

92-5

TRAFFIC ITEMS

Measurement and documentation of traffic items such as cables, luminaires and high mast poles will be handled in the same manner as pipe structures. The completion of form LC 612B is not necessary. The quantities and location of cable and other traffic items may be kept as original notes in a field book or other appropriate ISHC form. If the original notes are not bound in the record itself, they must be cross referenced in the record.

10M 8-80

PAGE No.

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

-PROJ. NO. 1

SECTION

STR. NO.

CONTRACT NO

T-12150

ITEM.

No. 6

OVERRUNS.

-AT 0

UNDERRUNS.

-AT 8

5

[illegible]

COMPUTED BY

CHECKED TGS.

BRIDGE DECK REPAIR ITEMS

Bridge Deck Repair items such as patching, surface seal, overlay and scarifying will be broken down by project in the final construction record. Pertinent original notes may be kept in a bound field book or on an appropriate ISHC form. Any original notes which are not bound in the record must be cross referenced in it.

FORM 1. C.—627
Rev. 2-62

Rev. 2-82

10M 8-80

INDIANA STATE HIGHWAY COMMISSION

CONSTRUCTION RECORD

94-1
PAGE NO. 5

3262 (B) 66-62-5757A
ST PROJ. NO. 5362 SECTION (A) STR. NO. 66-62-5699A CONTRACT NO. B-11729

ITEM BRIDGE DECK PATCHING No. 5

OVERRUNS _____ AT \$ _____ \$ _____ UNDERRUNS 28 AT \$ 4.50 \$ 126.00

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
PROJECT: SI-3262B	1602	1526		46	BOOK 1 OF 1	58
PROJECT: SI-5362A	798	816	18		BOOK 1 OF 1	11
ENTIRE CONTRACT	2400	2342		28		
<p>FINAL QUANTITIES OF PATCHING ARE BASED ON THE AREA OF DEGRADATION FOUND DURING HAND CHIPPING AND INVESTIGATION, WHILE THE ORIGINAL QUANTITY IS AN ESTIMATE.</p> <p style="text-align: center;">JCH</p>						

COMPUTED BY JGA

CHECKED *WIS*

PAGE No. 6

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

ITEM SURFACE SEAL No. 6

OVERRUNS _____ AT \$ _____ \$ _____ UNDERRUNS 59 AT \$ 0.65 \$ 38.35

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
Project: ST-3262B	2155	1916		239	Book 1 of 1	48
Project: JT-5362	1300	1480	180		Book 1 of 1	15
GUTTER CONTRACT	3455	3396		59		
THE AREAS SEALED ARE THOSE SHOWN ON THE PLANS, PLUS ANY THAT ARE DEEMED NECESSARY BY THE P.S. BOTH STRUCTURES WERE SEALED IN A SIMILAR MANNER AND COVERED ALL THE AREA SHOWN ON THE PLANS, BUT STILL DIFFERED FROM THE QUANTITIES SHOWN ON THE PLANS.						
			JEA.			

CHECKED *WLS*

CONSTRUCTION RECORD

3262
ST PROJ. NO. 5362 SECTION (B) 66-62-5757A
(A) 66-62-5699A CONTRACT NO. B-11729
ITEM BRIDGE DECK OVERLAY No. 7

OVERRUNS 2 AT \$ 20.00 \$ 40.00 UNDERRUNS _____ AT \$ _____ \$ _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
PROJECT: ST-3262B	733	736	3		BOOK 1 OF 1	53A
PROJECT: ST-5362A	600	599		1	BOOK 1 OF 1	6
ENTIRE CONTRACT	1333	1335	2			
<p>PROJ. 3262: I ADDED 3 SYDS. TO MAKE REPAIRS TO SOME SPALLING ON THE SOUTH APPROACH SLAB. THE SPALLING WAS MINOR AND DID NOT REQUIRE THE COSTLY FULL DEPTH APPROACH PAVEMENT REMOVAL / REPLACEMENT THAT WAS PLANNED, THUS SAVING \$1000.00.</p>						
<p>PROJ. 5362: PLACED SUBSTANTIALLY AS PLANNED.</p>						
JCH.						

COMPUTED BY *JUH*

CHECKED *WLD*

FORM I. C.-827
Rev. 2-82
10M 8-80

INDIANA STATE HIGHWAY COMMISSION
CONSTRUCTION RECORD

94-4
PAGE No. 8

ST 3262 (B) 66-62-5757A
PROJ. NO. 5362 SECTION (A) STR. NO. 66-62-5892A CONTRACT No. B-11729
ITEM CONCRETE SCARIFYING No. 8

OVERRUNS AT \$ UNDERRUNS 347 AT \$ 5.00 \$ 1735.00

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
PROJECT: ST-3262B	1053	893		160	Book 1 of 1	46
PROJECT: ST-5362A	920	733		187	Book 1 of 1	7
ENTIRE CONTRACT	1973	1626		347		
<p>THE PLANS INCLUDED AREAS OF ROADWAY SCARIFICATION AT BOTH STRUCTURES AND REQUIRED A CUT OF $\frac{1}{2}$". THE PLAN QUANTITY INCLUDED ENOUGH AREA TO PAY IF THE CUT WERE MADE IN 2 $\frac{1}{4}$" PASSES. I INSTRUCTED THE CONTRACTOR, BOTH AT THE PRE-CONSTRUCTION CONFERENCE AND AT EACH SITE PRIOR TO PERFORMING THE WORK THAT I WOULD PAY ONLY ONCE IF THE FULL $\frac{1}{2}$" WERE CUT IN 1 PASS. IF HE ELECTED TO MAKE THE CUT IN 2 $\frac{1}{4}$" PASSES THEN I WOULD PAY TWICE. THE CONTRACTOR ELECTED TO MAKE THE CUT IN 1 PASS, THEREFORE THE ITEM WAS UNDERRUN AS SHOWN.</p>						
		JEA				

COMPUTED BY JEA

CHECKED WLD

PAGE NO. 2

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

ITEM ADDITIONAL CONCRETE SCABIFYING No. 9

OVERRUNS _____ AT \$ _____ \$ _____ UNDERRUNS 71 AT \$ 1.50 \$ 196.50

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
Project: ST-3262B	183	232	49		Book 1 of 1	47
Project: ST-5362A	120	0		120	Book 1 of 1	7
ENTIRE CONTRACT	303	232		71		
<p>Proj: 3262: EXTENSIVE ADDITIONAL SCARIFICATION WAS REQUIRED TO REDUCE THE HEIGHT OF EXCESSIVELY HIGH AREAS ON THE DECK. THESE AREAS WOULD HAVE CAUSED THIN SPOTS IN THE OVERLAY, THEREFORE THEY WERE REMOVED.</p> <p>Proj 5262: NO ADDITIONAL SCARIFICATION WAS REQUIRED</p> <p>JEH.</p>						

CHECKED *MD*

PAGE NO. 10

3262 (B) 66-62-5757A
ST PROJ. NO. 5262 SECTION (A) STR. NO. 66-62-565DA CONTRACT NO. B-11729

No. 10

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
Project: ST-3262B	733	736	3		Book 1 of 1	53A
Project: ST-5362	600	599		1	Book 1 of 1	6
ENTIRE CONTRACT	1333	1335	2			
Proj 3262: THE WORKMAN REFLECTS THE APPROACH PAVEMENT REPAIRS MORE FULLY EXPLAINED ON PG. 7						
Proj 5362: PLACED SUBSTANTIALLY AS PLANNED.						
JCH						

CHECKED *MD*

PAGE No. 11

INDIANA STATE HIGHWAY COMMISSION CONSTRUCTION RECORD

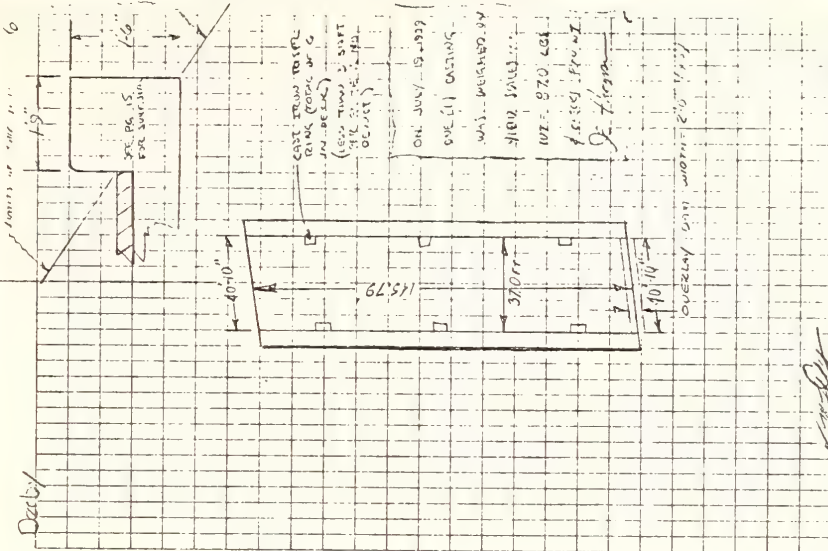
CONSTRUCTION RECORD
ST. PROJ. NO. 3262 (B) 5362 (A) SECTION 66-62-575A STR. NO. 66-62-505A CONTRACT NO. B-11729

ITEM FINISHING AND CURING No. 11

OVERRUNS 2 AT \$ 4.00 \$ 8.00 UNDERRUNS _____ AT \$ _____ \$ _____

LOCATION AND DESCRIPTION	QUANTITY ON PLANS	QUANTITY PLACED	OVER-RUNS	UNDER-RUNS	REMARKS	PAGE
PROJECT: ST-3262B	733	736	3		BOOK 1 OF 1	53A
PROJECT: ST-5362A	600	599		1	BOOK 1 OF 1	6
ENTIRE CONTRACT	1333	1335	2			
Proj 3262: SEE EXPLANATION - PAGE 7						
Proj 5362: PLACED SUBSTANTIALLY AS PLANNED						
			JEA			

CHECKED *pus*



ITEM #7 BRIDGE DECK OVERLAY

AREA = $145.79 \times 31.0 / 9 = 599.36 = 599$ SFT

PLACED 599 SFT ON 7-19-79 BY J. Thompson

PAY 599 SFT J. Thompson

ITEM #10 BLASTING AND CLEANING

AREA = 599 AS ABOVE

PLACED = 599 ON 7-18-79

PAY 599 SFT J. Thompson

ITEM #11 FINISHING AND CURING

AREA = 599 AS ABOVE

PLACED 599 ON 7-19-20/79

PAY 599 SFT J. Thompson

ITEM #12 OVERLAY (VANS)

AREA = $40.83 \times 4 = 163.32$ SFT 163 SFT

PLACED 163 SFT 7-13-79

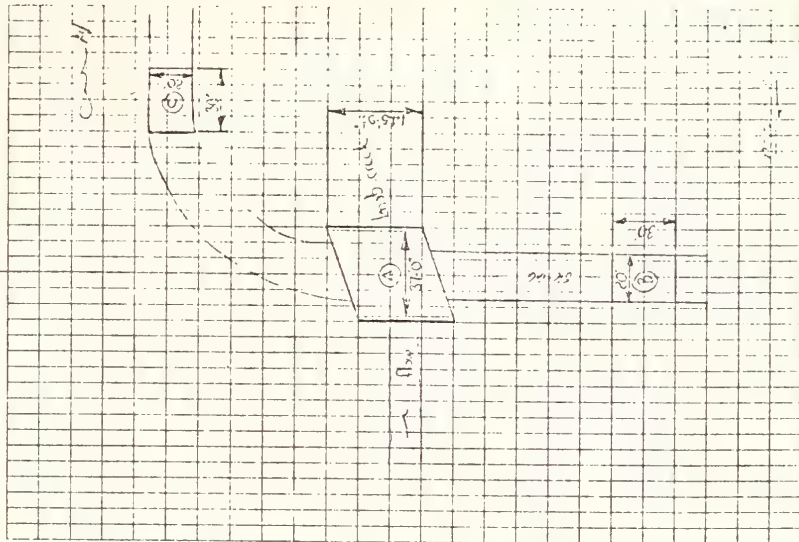
PAY 163 SFT J. Thompson

ITEM #22 CAST IRON, GRATES, BRACKETS & FITTINGS

SIX (6) GRATE 27" = 522 LBS TOTAL

PAY 522 LBS J. Thompson

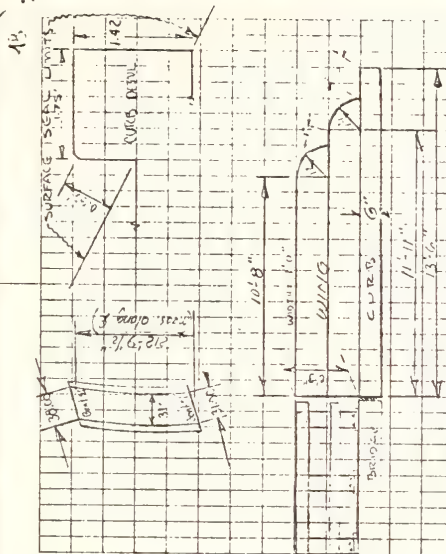
7



ITEM #	CONCRETE	SCAFFOLDING
A =	$145'9\frac{1}{2}'' \times 37.0' / 9 =$	5224 $\frac{3}{4} \times 1'$
B =	$30.0' \times 20.0' / 9 =$	666.7 $\frac{3}{4} \times 1'$
C =	$30.0' \times 20.0' / 9 =$	666.7 $\frac{3}{4} \times 1'$
	TOTAL	732.8 $\frac{3}{4} \times 1'$
James Thompson 11/17/99		PAY = 733 $\frac{3}{4} \times 1'$
		To P.R., F.C.R.

Item #9 - CONCRETE SCAFFOLDING - NOVEN 1900
 SE Thompson 11/17/99

James Thompson



ITEM # 6 SURFACE SEAL

$$\text{CURBS} = [212.5' \times \frac{1}{2}"] \times (0.60 + 1.75 + 1.42) \times 2 = 1692.74'$$

$$\text{DAMS} = (31.00 + 38.00) \times 1 = 69.00'$$

WING = (ALL EXTERIOR WALLS) - ONE SIDEWALL

$$\text{SIDE WALL TOP} = (00' 8" \times 11' 2") + \left(\frac{\pi \times 11' 2"}{4}\right) = 135.6'$$

$$\text{SIDE WALL MID} = (11' 11" \times 13' 6") + \left(\frac{\pi \times 13' 6"}{4}\right) = 137.9'$$

$$\text{SIDE WALL BASE} = (13' 6" \times 10') = 67.5'$$

$$\text{FRONT END} = (2' 3" \times 10') = 22.5'$$

$$\text{TOP LABEL} = (10' 9" + 0' 7" + 6' 7") \times 1 = 11.25'$$

$$\text{TOP PARAPET WALL} = \left(\frac{\pi \times 21' 2"}{4}\right) + \left(\frac{\pi \times 21' 2"}{4}\right) \times 1 = 3.53'$$

$$\text{TOTAL} = 111.13'$$

$$\times 4 = 804.52'$$

$$1916.34'$$

$$\text{PAV} = 1916.34'$$

$$\text{PAV} = 1916.34'$$

$$\text{PAV} = 1916.34'$$

$$\text{PAV} = 1916.34'$$

$$\text{PAV} = 1916.34'$$

$$\text{PAV} = 1916.34'$$

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CONCRETE WALL 5' THICK

1916.34'

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ENTIRE DICK

N/D SCALE

309.137

528057

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$$G_{10} \cap W_{PA} = G_{10} \cap T_{PA}$$

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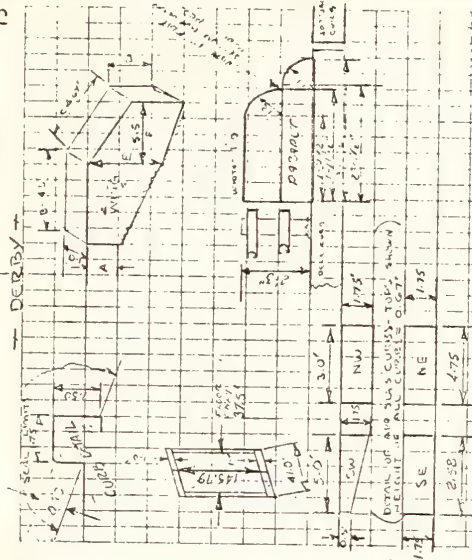
[Signature]

389.03

329.55

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51



ITEM #	6	SURFACE SEAL	-SET-
CURBS	=	$145.19 \times (0.69 + 1.75 + 1.5) \times 2 + (1.2 \times 1.4)$	$= 1136.35$

OVERLAY/DAYS	$(41 \times 1)^2 =$	82,02
--------------	---------------------	-------

$V_{A1} = 95$	$NW = 1 \times (0.03 + 4.5 + 6.7 + 2.03) = 14.3$	✓
TOPS		

$$N_6 = 1 \times (0.42 + 4.5 + 6.67 + 2.53) = 13.92 \quad \checkmark$$

SIDES: $\sqrt{A^2 + B^2 + C^2} = \sqrt{14.05^2 + 4.5^2 + 6.27^2} = 13.50'$

$$\frac{NW}{2} = \frac{3.03 + 3.25}{2} \times 6.5 + \frac{3.5 + 2.03}{2} \times 5.5 = 25.9'$$

$$NE = \left(\frac{\frac{0.42 + 3.67}{2} \times 4.5 + \frac{0.33 + 3.67}{2} \times 5.5 \right)^E = 25.1 \quad \checkmark$$

$$SE = \frac{\left(\frac{A}{0.03} + \frac{C}{2.33} \right) + \left(\frac{B}{2.33} + \frac{D}{2.20} \right)}{1.45} \times 5.5 = 20.39 \text{ A}$$

$$SW = \frac{0.5 + 2.33}{2} \times 45 + \frac{2.33 + 1.83}{2} \times 5.5 = 17.11 \text{ m}$$

P-FACTS: (ALL FIVE ARE IN THE SAME WAY) ✓
 FORM FIVE = (2.25 X) ✓

FAIR, TOP =	1.17 X 1.79 X 2 =	4.19 ✓
-------------	-------------------	--------

[illegible]

$$X_2 = \frac{(\pi \times 2.17) + (\pi \times 2.33)}{4} + 1.67 \times L = 5.40$$

USE 20123 FORM = 00.23 00.92d

1445.027

[illegible]

CURBS Δu_{21} :
SW = (0.5 + 1.75)

$$S = (2.5 \times 10^7)$$

$$x_{NW} = (3.0, 1.07) +$$

TOTAL FREQ:

8-172

Q. 11. 11. 11.

Yacht

1871

17

Item # 9" ADDITIONAL SCARIFYING

ADDITIONAL SCARIFYING WAS REQUIRED TO REMOVE EXCESSIVE/ HIGH AREAS TO FACILITATE IN BUILDING A BETTER RIDING SURFACE, WITH THE REMOVAL OF OVER RUN IN OVERLAY MATERIAL, AND IN ORDER TO AVOID THIN SPOTS. HOWZAT? ①

A = $7 \times 40 = 280$ yd

B = $12 \times 50 = 600$ yd

C = $7 \times 30 = 210$ yd

D = $10 \times 50 = 500$ yd

E = $3.5 \times 30 = 105$ yd

F = $13 \times 10 = 130$ yd

$$2035 \text{ yd} \text{ SEE } 1/4 = 236.7 \text{ yd}$$

SAY =

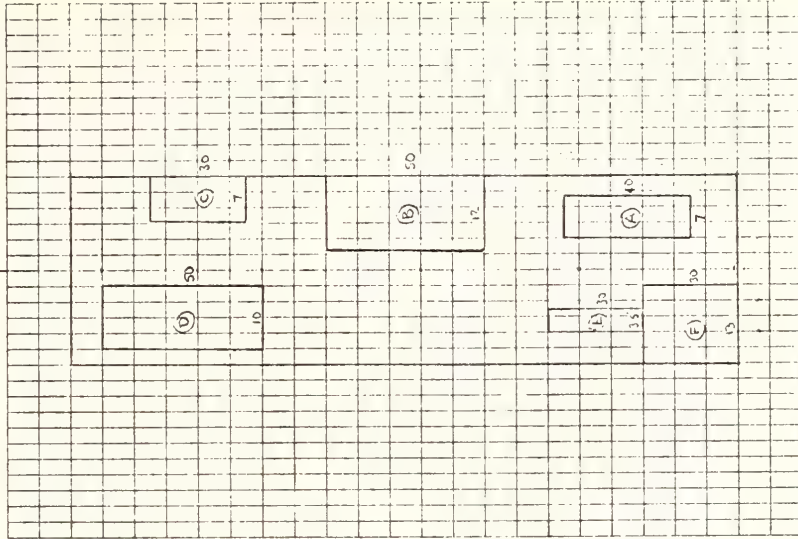
PAY:

236.7 yd

Dennis Thompson PER SIGNATURE 6/9/25

PLAN - 1835 JULY 23/25 45' JUNE 2/25 7/25

[Signature]



53A

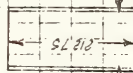
ITEM # 7	BRIDGE DECK OVERLAY		
AREA =	212.75 X 31.0 / 9 = 732.82 sq ft	733 sq ft	
ADDED SLAB =	3.0 X 9.0 / 9 = 3.0 sq ft	3.0 sq ft	
6/24/73	TOTAL	736 sq ft	
PAVED	736 sq ft	PAV 736 sq ft	Done & thort

ITEM # 10	BLASTING AND CLEANING		
AREA =	733 + 3 = 736 AS ABOVE		
PAVED =	736 6/24/73		
PAY	736 sq ft	Done & thort	

ITEM # 11	FORMWORK AND CURING		
AREA =	736 AS ABOVE		
PAVED =	736 6/24/73		
PAY	736 sq ft	Done & thort	

Signature

ATTN: MR. L. CURTIS, JR. 100-10



Item #5 Bridge Deck Patching

SPAN A = 495.35' FROM PG. 155 ✓
 SPAN B = 503.15' " " 56 ✓
 SPAN C = 530.50' " " 57 ✓
 SLAB = 27.00' " " 61 ✓
 1556.00' SPAN TO THE CENTER

1556.00' SPAN TO THE CENTER
 1556.00' SPAN TO THE CENTER

53

TOTALS

EXPANSION TO SOUTH APPROACH SLAB = 3' 10" 27' = 215' ✓
 215'

DATA FOR COMPUTING B BORROW

This section of the Manual as indicated in the Index consists of two diagrams and 108 Tables for determining B Borrow quantities (backfill). These pages are not included in this copy of this report as they were not changed. Copies are available if desired from:

Joint Highway Research Project
Civil Engineering Building
Purdue University
West Lafayette, Indiana 47907

COVER DESIGN BY ALDO GIORGINI